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Establishing consensus on the best ways to educate children about animal welfare and prevent harm

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1 **Establishing consensus on the best ways to educate children about animal welfare and**
2 **prevent harm: an online Delphi study**

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23 Running header: Consensus on animal welfare education for children

24

25

26 **Establishing consensus on the best ways to educate children about animal welfare and**
27 **prevent cruelty: an online Delphi study**

28

29 **Abstract**

30 Many animal welfare organisations deliver education programmes for children and young
31 people, or design materials for school teachers to use. However, few of these are scientifically
32 evaluated, making it difficult for those working in this field to establish with any certainty the
33 degree of success of their own programmes, or learn from others. There has been no guidance
34 specifically tailored to the development and evaluation of animal welfare education
35 interventions. Accordingly, a three-stage online Delphi study was designed to unearth the
36 expertise of professionals working in this field, and identify degree of consensus on various
37 aspects of the intervention process: design, implementation and evaluation. 31 experts
38 participated in Round 1, representing 11 of 13 organisations in the Scottish Animal Welfare
39 Education Forum (SAWEF), and 11 of 23 members of the wider UK based Animal Welfare
40 Education Alliance (AWEA). Seven further professionals participated, including four based in
41 Canada or the US. 84% of the original sample participated in Round 2, where a high level of
42 consensus was apparent. However, the study also revealed areas of ambiguity (determining
43 priorities, the need for intervention structure and degree of success). Tensions were also evident
44 with respect to terminology (especially around cruelty and cruelty prevention), and the
45 common goal for animal welfare to be part of school curricula. Findings were used to develop
46 a web-based framework and toolkit to enable practitioners to follow evidence-based guidance.
47 This should enable organisations to maximise the quality and effectiveness of their
48 interventions for children and young people.

49

50 **Keywords:** animal welfare, animal welfare education, children, cruelty prevention, Delphi,
51 young people

52

53 **Introduction**

54 To promote the welfare of animals among children and young people, many organisations offer
55 educational interventions. The aim of this study was to bring together the views of experienced
56 professionals working in this field and identify consensus on both priorities for practice and
57 key components of effective interventions. It also sought to illuminate any potential
58 incongruence in expert opinion and identify key challenges facing practitioners in this field.
59 Ensuring animal welfare education interventions are successful in producing intended
60 outcomes and are both financially viable and sustainable are key concerns for animal welfare
61 organisations given increased concerns about the treatment of animals in society and
62 difficulties sourcing funding.

63

64 *Animal welfare education (AWE)*

65 There is a great deal of work being undertaken to help children and young people learn more
66 about animals, with the goal of reducing (and ultimately eradicating) the incidence of animals
67 being harmed. In the UK, this usually takes place under the banner of ‘animal welfare
68 education’ or ‘cruelty prevention’ and is often designed and delivered by animal welfare
69 organisations. The focus is usually on preventing accidental/unintentional harm rather than
70 deliberate cruelty, as the majority of cases seen by charities are due to neglect or mistreatment
71 because owners do not know how (or are struggling) to care for their animals appropriately
72 (Scottish SPCA 2020; Vermeulen & Odendaal 1993). Some organisations, like the Scottish
73 SPCA and the RSPCA in England/Wales, work inclusively and take a universal approach to
74 their educational interventions. However, there are other organisations and specific

75 interventions that target particular groups of young people, either because they are identified
76 as being more likely to cause harm to animals (eg links with criminality or domestic
77 abuse/neglect), and/or because they might benefit psychologically and behaviourally from
78 understanding more about animal welfare. Examples include the Scottish SPCA's 'Animal
79 Guardians' programme and the RSPCA's 'Breaking the Chain'.

80

81 While AWE interventions are highly varied and sometimes include direct interaction with
82 animals (eg Nicoll *et al* 2008), this is becoming less common due to concerns about child safety
83 and the welfare of any animals involved. Interventions can be short-term or long-term, have
84 one-off or multiple sessions. Some involve working with a small number of children/young
85 people quite intensively, while others are less targeted, more universal, and are rolled out to
86 the same age groups in schools, year on year, in order to maximise reach.

87

88 ***Evidence-based interventions***

89 Unfortunately, few AWE interventions have been scientifically evaluated, and there is no
90 evidence-based guidance for organisations seeking to develop an educational intervention
91 programme. Equally, there is limited evidence to persuade potential funders to support this
92 work. There are some evaluation studies that have examined the impact of interventions on
93 children and young people. In the US, for example, improvements in attitudes towards the
94 treatment of animals following humane education programmes have been found in fourth grade
95 children (Ascione & Weber 1996; Samuels *et al* 2016). The former study found long-term
96 improvements (one year later) in positive attitudes towards animals and human-directed
97 empathy as a result of participating. In Mexico, studies have shown positive effects of animal
98 welfare programmes on first grade children's welfare knowledge (Aguirre & Orihuela 2010),
99 and increases in 8 to 10-year-old children's knowledge of, and attitudes towards farm animals

100 (Lakestani *et al* 2015). In Italy, Mariti *et al* (2011) evaluated a classroom-based intervention
101 for 9 to 11-year-old children on pets and found improvements in welfare knowledge, fear of
102 animals, and responsibility. UK-based research has also shown increased knowledge and
103 higher endorsements of positive behaviours in 13 and 14-year-olds following an educational
104 event on the welfare needs of chickens (Jamieson *et al* 2012). One-off animal welfare
105 workshops with primary school children, developed by the Scottish SPCA and linked with the
106 Scottish ‘Curriculum for Excellence’, were also effective in improving children’s knowledge
107 of animal welfare needs, but they appeared not to influence attitudes towards animals or
108 attachment to pets (Hawkins *et al* 2017).

109

110 More recently, digital AWE interventions (relating to pets and farm animals) have been
111 evaluated for primary school children in the UK, revealing welfare knowledge gains, enhanced
112 belief in animal minds, and attitudinal changes concerning the (non) acceptability of animal
113 cruelty (Hawkins *et al* 2019a; 2019b). These studies suggest that the more interventions
114 actively engage children in learning, the greater the learning outcomes are likely to be.
115 However, it is also important to note that immediate improvements are not necessarily retained
116 when children are tested at a later date (eg Coleman *et al* 2015). At present, there are few
117 evaluations that use delayed post-tests or that assess current practice in schools. Most
118 interventions have been developed specifically for research and have taken place across a range
119 of cultural contexts. As such, there is likely to be wide variation in terms of the curriculum and
120 pedagogy involved.

121

122 Similar concerns about the lack of an evidence-base have been expressed in relation to the
123 rapidly growing use of animal-assisted interventions or therapy in health and social care (AAI
124 & AAT), an area that is largely unregulated in the UK. Ratschen and Sheldon (2019) argue that

125 we can conclude little about their effectiveness and their continuity rests on “little more than
126 (promising) potential. Given the relative lack of evidence based protocols and standards, we
127 are unlikely to be maximising therapeutic benefit, minimising harm, or upholding ethical
128 standards for both humans and animals” (p 2). They go on to argue that any studies or full
129 randomised trials are methodologically weak, lacking well-designed control conditions.
130 Neither are interventions standardised or reproducible. Ratschen and Sheldon also draw
131 attention to the lack of detailed investigation with respect to identifying the mechanisms
132 underlying animal-assisted interventions, an issue we return to below.

133

134 In the US, there have been calls to determine best practice in humane education through
135 rigorous and methodologically sound evaluation research (Arbour *et al* 2009; Arkow 2006;
136 Tardif-Williams & Bosacki 2015). Humane education is broader than AWE and defined as “a
137 form of character education that uses animal-related stories, lessons, and activities to foster
138 respect, kindness, and responsibility in children’s relationships with both animals and people”
139 (Faver 2010 p 365). More recently, this has extended to concern for the environment,
140 emphasising the interconnectedness of animals, people and the planet, promoting the idea that
141 children can become ‘guardians of the earth’ (Rule & Zhbanova 2013). Like AWE in the UK,
142 programmes vary in terms of content and pedagogy, but most focus on “instilling, reinforcing,
143 and enhancing young people’s knowledge, attitudes, and behavior toward the kind,
144 compassionate, and responsible treatment of human and animal life” (Ascione 1997 p 60). In
145 the current climate of heightened awareness of human destruction of the natural environment
146 and its associated consequences, these concepts are increasingly coming to the fore. Yet, we
147 have little evidence to draw on either from the UK or beyond. How might we intervene to
148 ensure the best possible reciprocal relationships between humans and animals?

149

150 *Ensuring quality & assessing mechanisms*

151 Teaching children about animal welfare may well be the definitive way to improve the welfare
152 of animals (Hawkins *et al* 2017), as they are both the consumers of the future and growing up
153 with a different set of values and influences from the children of the past. It is often assumed
154 that living in an increasingly digitised and urban world has led to people becoming
155 disconnected from nature (Kesebir & Kesebir 2017). However, global concerns may have
156 awoken or renewed an appreciation of our natural surroundings and how to care for them. There
157 have been numerous initiatives designed to re-connect people (children especially) with nature
158 and improve mental health. Simultaneously, there has been growing awareness of the need for
159 sustainable and ethical food, farming, and environmental practices. The restrictions imposed
160 by this year's global Covid-19 pandemic might also have led people to recognise the
161 significance of human-animal relationships for human health. Alongside an educational
162 emphasis on understanding the plight of others and young people's recent involvement in
163 environmental campaigning/activism, children today may be more likely than their earlier
164 counterparts to be open to the idea of being a 'guardian of the earth' or an 'animal guardian'.

165

166 While wider cultural trends are likely to be influential, the extent to which children can be
167 encouraged to care, and take effective action to improve the lives of animals is dependent, to
168 large degree, on the quality of education. At present, we know very little about the constituents
169 of successful programmes, what is being taught, or how successful interventions have been
170 (Muldoon *et al* 2009; Muldoon *et al* 2012). In line with Ratschen and Sheldon's (2019)
171 observation relating to AAI noted earlier, understanding the mechanisms underlying the child–
172 animal relationship as well as acts of apparent cruelty is crucial for the successful development
173 and evaluation of AWE interventions:

174 “By basing animal welfare education on theory and research (such as attitude and behaviour
175 change models as well as child development and attachment models), we can start to build
176 theoretically driven logic models for our interventions, which may lead to more successful
177 outcomes and effective changes in child–animal interactions” (Hawkins *et al* 2017 p 254).

178

179 While the evidence-base relating to child-animal interactions is still relatively small, it is
180 growing. However, hardly any research has specifically addressed the issue of harm caused
181 deliberately by children. According to Hawkins *et al* (2016), only 10 studies had been
182 published since 2011, and research has typically been retrospective, including adults rather
183 than children (Hawkins & Williams 2016). Accordingly, we have more knowledge about how
184 to develop better understanding of animals and the prevention of unintentional harm. There is
185 a lot more work to be undertaken to understand and respond to negative attitudes and
186 intentionally harmful behaviours. A recent review of 32 studies examining the relationship
187 between animal cruelty and interpersonal violence (Longobardi & Badenes-Ribera, 2019)
188 suggests a strong connection between harm caused to animals in childhood/adolescence and
189 other forms of violent and antisocial behaviors, both at the time, and later in life. In particular,
190 recurrent bouts of harming animals during childhood significantly predicted perpetration of
191 interpersonal violence in adulthood. Specialist programmes are clearly required in these
192 circumstances (eg ‘AniCare® Child’ Shapiro *et al* 2014).

193

194 In short, in order to enhance AWE for children and young people, we need to identify how
195 organisations are putting their programmes together and the extent to which interventions are
196 based on an evidence-based model defining the mechanisms by which intended learning and
197 behavioural outcomes will be achieved. Animal welfare professionals working with children
198 may not have had any formal teacher education or a research (monitoring/evaluation)

199 background, so they may need support to develop their skills and resources (Muldoon *et al*
200 2012). The study described in this paper is the first to consult expert practitioners in the field
201 in order to build a strong source of support. Here, we focus on areas of consensus and discord
202 with respect to the design, implementation and evaluation of AWE interventions. Our partner
203 paper (Muldoon & Williams under review) provides a more in-depth assessment of practitioner
204 perceptions and challenges, with an eye to the future development of AWE in the UK.

205

206 **Materials and methods**

207

208 *Online Delphi and participant recruitment*

209 Following approval by the Clinical and Health Psychology Ethics Committee, University of
210 Edinburgh, all members of two key umbrella organisations were invited to participate in our
211 online Delphi: the Scottish Animal Welfare Education Forum (SAWEF), and the UK Animal
212 Welfare Education Alliance (AWEA). We also advertised the study through our contact list
213 (developed through attendance at our conferences and workshops), social media and our
214 website. Although we have connections with these groups, working closely with some,
215 introducing them to research and showing them how to use evidence to inform practice, we are
216 clear ‘outsiders’ as academics with no experience of practising directly in the field of animal
217 welfare/cruelty prevention. Participants were aware that this study would lead to the production
218 of guidelines for those developing and delivering AWE/cruelty prevention interventions.
219 Therefore, this may have encouraged them to share the challenges they have experienced.

220

221 We chose the multi-staged Delphi Technique as it focuses specifically on achieving expert
222 consensus on an important issue (Keeney *et al* 2011). Each stage is designed to build on the
223 results of the previous one (Sumsion 1998). Hence, our Delphi consisted of three ‘Rounds’:

- 224 (1) Round 1 on-line survey, using Online Surveys, gauging initial views and identifying key
225 themes (areas to assess consensus).
- 226 (2) Round 2 on-line survey, using the same platform, presenting collated statements and
227 requiring ratings of agreement and importance or selection of phrases that resonated most
228 with the participant.
- 229 (3) Round 3 report, sent via email, gathering reflections on findings from participants.

230

231 We drew on our academic experience of developing and evaluating interventions for children
232 and young people to draft questions, and prior to launching the Round 1 survey, the final set
233 of questions was piloted with the educational lead of a UK animal welfare charity. They
234 reviewed our questions and provided an estimate of time taken to complete the survey. The
235 survey was subsequently administered through Online Surveys (previously Bristol Online
236 Surveys). An email invitation was sent with an introduction to the study and a link to the survey.
237 The first page provided information on its purpose and how data would be used (ie to develop
238 a toolkit and write publications, in which participant data would be anonymised). Participants
239 had to tick a box to provide consent, demonstrating that they understood the statements below
240 and were happy to proceed.

- 241 1. I confirm that I have read and understood the information provided, via email, for the
242 above study. I have had the opportunity to consider the information, ask questions and
243 have had these answered satisfactorily.
- 244 2. I understand that my responses will be made anonymous to other members of the panel.
- 245 3. I understand that my participation is voluntary and that I am free to withdraw from the
246 study and request the removal of my data at any point during the study.
- 247 4. I understand that the researcher will hold all information and data collected in a secure
248 and confidential manner.

249 Demographic questions were then asked (age group, sex, and whereabouts they were based;
250 selecting from a list), and questions relating to their roles and experience (both organisational
251 and personal) in AWE/cruelty prevention. A series of open-ended questions were then asked
252 within five sections listed below, to gauge initial views. Participants could write as little or as
253 much as they liked, and many provided very detailed responses.

- 254 (1) The need for AWE/cruelty prevention programmes/interventions
- 255 (2) Priorities and ideal target groups
- 256 (3) Components of successful interventions
- 257 (4) Anticipated outcomes
- 258 (5) Evaluation of interventions

259

260 Participants were also asked how many animal welfare/cruelty prevention intervention
261 programmes (aimed at children/young people) they were directly involved with at the time
262 (June-September 2019). If they were happy to share information about their own programmes/
263 interventions, they were asked about each one at the end of the survey (a combination of
264 multiple choice and open-ended questions). Data relating to participants' own interventions, as
265 well as the challenges described by participants, are the focus of our partner paper (Muldoon
266 & Williams under review). We also asked participants to provide an email address that could
267 be used to maintain contact. Emails were only sent either to individuals or using blind copy
268 and only the two authors had access to the data. Quantitative data were exported with no
269 identifiers into an Excel spreadsheet, while qualitative data were extracted into separate word
270 documents to examine responses question by question. These were stored on the University's
271 secure server (OneDrive) with no identifying information.

272

273 Acknowledging that attrition can be a problem using the Delphi Technique (Keeney et al 2011),
274 the lead author maintained email contact with potential participants for Round 1 to achieve the
275 sample of 31. Once the survey was closed (approximately four months after launching), Round
276 1 data were analysed and a set of statements relating to each section of the survey was
277 developed, scrutinised and refined by the authors. Two Education Officers from a leading UK
278 animal welfare charity reviewed the final questions.

279

280 The Round 2 survey (administered January/February 2020) comprised mostly close-ended
281 multiple choice questions. The majority used 5-point Likert scales to assess extent of agreement
282 with a statement or the degree to which they felt the identified issue was important. Some
283 questions asked participants to prioritise/order key considerations. At the end, a series of open-
284 ended questions relating to issues of terminology highlighted in Round 1 or anything they felt
285 had not been covered in Round 2, afforded participants the opportunity to provide their own
286 definitions or raise any issues they considered important, to ensure no views were inadvertently
287 missed. Members of the original expert panel were then invited to complete the Round 2 survey
288 that was closed just over 7 weeks after launching. Following Round 2 data analysis, a report
289 detailing the degree of consensus across all items of the survey was circulated to participants,
290 with an invitation to respond with their final reflections.

291

292 *Participants*

293 In total, 22 representatives from the 36 UK organisations targeted took part (61%). 85% of the
294 SAWEF group (n=13) participated. Only two members did not take part as they felt on the
295 periphery of AWE/cruelty prevention and had limited experience of interventions, so we
296 achieved 100% of valid participants. 48% (n=11) of the 23 organisations involved in the wider
297 AWEA participated. Through advertisement, seven further organisations contributed,

298 including four outside the UK. Of the 31 professionals who took part in Round 1, 26 also
299 completed Round 2 (84% response rate).

300

301 Participants were from 25 different animal welfare organisations in total. The majority were
302 charities. 87% were based in the UK (n=27), with 52% (n=14) of those situated in Scotland
303 (45% of the whole sample). Four participants were based in either the United States (n=2) or
304 Canada (n=2). The majority (87%) were female (Female=27, Male=4), with their ages ranging
305 from 21-29 (7%) to 60+ (8%); the majority (45%) falling into the age 30-39 category. Almost
306 all participants (n=29) had worked with vulnerable children and/or young people. The roles
307 they currently occupied are outlined in Table 1. 29% were Heads of Animal Welfare Education,
308 and 26% Education Officers. Some held multiple roles, hence the total being larger than the
309 sample size.

310

311 **Table 1: Delphi participants' current roles (Round 1)**

Role	N
Head of Animal Welfare Education	9
Education Officer	8
Education Programme Coordinator/Team Manager	6
Head of Policy	3
Director of Education	2
Outreach Officer	2
Education Specialist/Advisor	2
Executive Director and Lecturer	1
Founder and Chief Executive Officer	1
Rescue Director & Rabbit Behaviourist	1
Animal-Assisted Intervention Officer	1
Career Educator on Animal Training and Welfare	1
Trustee – Chairman, Vice President	1
Senior Scientific Officer – Tertiary Education	1
<i>Total</i>	39

312

313 Half (n=15) of the professionals had worked in the field for more than 10 years, seven for
314 between 6 and 10 years, and six for between 3 and 5 years. Only three people had worked in
315 this area for less than 2 years. Almost all participants (n=29) had worked with vulnerable
316 children and/or young people, either in previous work roles or as a result of their current
317 programmes. Seven had previously been teachers either in primary schools or further
318 education. Six had worked specifically with young offenders, five with looked after children,
319 and nine with children with special educational needs.

320

321 In terms of the organisations they currently worked for, 65% of participants (n=20) described
322 them as having a long history of designing and delivering educational interventions. 32%
323 (n=10) were currently delivering an educational intervention, and 10% (n=3) were just starting
324 to think about developing one. Figure 1 shows that nearly all participants had been personally
325 involved in the design and delivery of interventions for children and/or young people and the
326 development of materials. Just over three quarters had been involved in evaluating
327 interventions, and nearly a third in policy development. 77% of participants (n=24) were
328 currently involved with an intervention; 29% working on one intervention (n=9), 3% on two
329 (n=1), 23% on four or five (n=7), and 23% on more than seven (n=7).

330

331 **<Insert Figure 1 here>**

332

333 *Analysis*

334 The first author employed both content and thematic analysis to examine Round 1 data. For
335 each question, she identified and categorised all viewpoints, drafting a reflection on the
336 issues/themes arising and a comprehensive set of statements that reflected each theme,
337 capturing all views and staying close to the language used by participants. Alongside each

338 statement/theme, the number of participants describing the viewpoint/s or issue/s identified
339 within the statement was provided. These statements were then examined and discussed by
340 both authors and the number of statements reduced based on significant overlap or the
341 identification of a super-ordinate category that captured multiple perspectives (participants
342 outlined different forms of knowledge for example). Sometimes very closely related issues in
343 two or three statements could be added together, resulting in one extended statement. This
344 could occur when participants used different language to describe a very similar viewpoint. In
345 essence, we moved towards a progressively tighter set of statements, capturing all
346 perceptions/beliefs as concisely as possible.

347

348 The final set of statements was incorporated into the Round 2 survey. Once these data were
349 collected, we were able to identify the degree of consensus with respect to each statement. Data
350 were analysed using descriptive statistics and percentage agreement/disagreement with each
351 statement was used to determine consensus. This is the most commonly used method in Delphi
352 studies and considered particularly meaningful if nominal or Likert scales are used (Keeney et
353 al 2011; Von der Gracht 2012). We decided, a priori, that a percentage of 75% and above would
354 constitute the cut-off point for consensus. Although there is no agreed standard for defining
355 consensus at present; 75% was found to be the median threshold in a systematic review of 100
356 English language Delphi studies (Diamond et al 2014), and used in recent studies (Berger-
357 Estilita *et al* 2019; Singer et al 2020; van den Driessen Mareeuw *et al* 2020).

358

359 In practice, we assumed consensus if at least 75% of the participants chose 1 (Strongly agree)
360 or 2 (Agree) for each statement. There were a few questions where more people disagreed than
361 agreed. In these cases, and as indicated within the tables in the Results section, degree of
362 consensus was ascertained through calculating the percentages who chose 4 and 5. Where

363 participants had to rank items in order of importance, we calculated consensus for the top 3
364 choices combined. The total number of participants ranking a question 1, 2, or 3, was
365 calculated, enabling us to determine the proportion of the whole sample that agreed on the item
366 being a priority. Similarly, alongside some of the questions asking participants to decide to
367 what extent they agreed or disagreed with a given statement, we also asked which of these
368 statements resonated most, adding a further dimension to our conclusions on consensus.

369

370 **Results**

371

372 Below we present the consensus data in the order in which questions were presented in Round
373 2 under the five survey sections, with an additional one relating to terminology and definitions.
374 Within each table, we have used bold formatting to highlight the statements that reached our
375 threshold for identifying consensus. Percentages showing agreement and median scores are
376 presented to provide an indication of the distribution of individual responses.

377

378 *(1) The need for AWE/cruelty prevention programmes/interventions*

379 The survey began with participants' definitions of cruelty (Q1 Table 2) and there was
380 consensus on the first two that (a) emphasise deliberate/intentional harm, injury, pain or fear
381 and (b) unnecessary harm/suffering that could be intentional or unintentional, direct or indirect.
382 There was no consensus on whether 'cruelty' is different from 'neglect' or if cruelty is difficult
383 to define, highlighting the complexity of the term and suggesting there are widely varied
384 viewpoints on these issues. We return to this issue towards the end of the Results.

385

386 **Table 2: Participants' definitions of 'cruelty' to animals**

Q1 In Round 1, we asked participants to define 'cruelty' to animals. Please show us the extent to which you agree with the following definitions

Statement	Median (1-5)	% agreement	% preferred definition
1 Cruelty is anything that causes unnecessary harm/suffering to an animal. This could be intentional/deliberate/direct (abuse) or unintentional/indirect through ignorance or lack of resources. Cruelty could be the result of acting in a way that compromises an animal's welfare, or failing to act (negligence) to ensure needs are met	1	80.8	61.5
2 Cruelty is any behaviour that deliberately/intentionally causes harm, injury, pain or fear, without regard for the animals' feelings or reactions	1	96.2	23.1
3 Cruelty is different to neglect. Neglect is less aggressive and not necessarily malicious even though it can cause suffering to an animal	2	53.9	3.8
4 It is difficult to define cruelty as the term is used in many different ways. It is interpreted and defined differently depending on background/upbringing, experience, culture, religious or moral beliefs and education. Similarly, there are different interpretations of what constitutes 'unnecessary suffering'	2	61.5	11.5

387

388 Subsequently, participants were asked the extent to which they agreed with the statements in
 389 Table 3 about why children/young people are cruel to animals (Q2). Participants highlighted
 390 these as risk factors in Round 1. There was consensus that all of these were underlying causes,
 391 with some recognition that a child's behaviour (a) cannot be 'divorced' from the immediate
 392 environment they find themselves in (particularly the family environment), and (b) can signal
 393 vulnerability. However, when asked which three causes are most important to address in
 394 interventions (Q3), participants only agreed on the lack of education (poor knowledge of
 395 animal welfare needs and sentience). 92% ranked this in their top three; 15 participants ranking
 396 it first, 2 second and 7 third.

397

398 **Table 3: Participants' perceptions of the causes of cruelty**

Q2 Please show us the extent to which you agree with the following statements about why children/young people are cruel to animals

	Statement	Median (1-5)	% agreement
1	Lack of education – poor knowledge/understanding of animal welfare needs, failure to understand that animals are sentient beings, curiosity, learned behaviour	1	96.2
2	Failure to think through/understand the consequences of personal actions, or guilty by association (in the wrong place at the wrong time or peer pressure/lack of confidence to intervene or not go along with things)	2	96.2
3	Serious mental health & behavioural issues where children may or may not be aware of the pain and suffering they are causing. It may be a cry for help (in abusive situations with no support/intervention). Cruelty may occur through a lack of self-regulation or explosive outbursts	1.5	88.5
4	Adverse childhood experiences - trauma or disruptions to attachment. Children who have experienced or witnessed abuse themselves may abuse animals or see cruelty as normal behaviour. Children may cause harm through frustration/anger/over-reliance on the animal, or as a way of gaining a sense of control or agency that they do not have in other areas of their life. Alternatively, they may imitate or act out things they can't put into words	1	96.2
5	There are different reasons/causes depending on the type of cruelty – it needs to be understood and responded to on a case-by-case basis	1	88.5
6	Cruelty can occur as a result of alcohol or drug misuse	2	88.5
7	Cruelty can be due to lack of empathy/compassion or any kind of affiliation with the natural world	2	88.5
8	Viewing the animal as 'something' not 'someone' – reinforced through attitudes/ behaviours in the immediate community, cultural norms, family, or peer/friendship groups	1	92.3

399

400

401 When asked how important it was to teach children/young people about animal welfare (Q4),
 402 and provide a justification for their response (Q5), there was 100% agreement (medians = 1)
 403 on two statements: (a) 'it contributes to (is a vehicle for promoting) the development of vital
 404 life skills, fostering empathy, compassion, self-understanding and prosocial behaviour', and
 405 (b) 'it is important because animal welfare, public health, human wellbeing and the
 406 environment are intrinsically linked. Learning about animal welfare should also contribute to

407 increased concern about all sentient beings and the wider environment in which we live'. There
408 was also strong agreement (all median scores = 1) that it:

- 409 • is fundamental to creating a caring compassionate world – one of the most important
410 things that we can do in society today (96% agreement).
- 411 • improves knowledge of animal needs and how to care properly and have respect for
412 animals, eliminating unintentional cruelty (96% agreement).
- 413 • is important that animal welfare education directly addresses the proliferation of
414 misinformation and also educates children about what animals like or dislike as well as
415 what they need (96% agreement).
- 416 • is very important, but we need to instil a sense of responsibility and empowerment so
417 that people will make positive decisions and actions for animals (change behaviour) (96%
418 agreement).
- 419 • is important in safeguarding children and animals (especially with regard to
420 understanding animal behaviour/signals and appropriate handling) (92% agreement).

421
422 Similarly, there was strong consensus (between 92 & 100%, medians = 1) on the reasons why
423 it is important to intervene to prevent cruelty to animals (Q6 & Q7). The majority (65%) felt it
424 was useful to distinguish between AWE and cruelty prevention (Q8), though this did not reach
425 our cut-off consensus point, with 19% feeling the two terms should be used together or
426 interchangeably. 15% of those working in the field were not sure if a distinction was useful.

427
428 ***(2) Priorities and ideal target groups***

429
430 When asked which areas should be priorities for interventions (Q9), between 88 and 100% of
431 participants (medians = 1 or 1.5) agreed that interventions should tackle the eight key issues

432 highlighted in Table 4. However, when asked to decide on the top three priorities (Q10), as
 433 Table 4 shows, there was no consensus on what these should be.

434

435 **Table 4: Participants' priority areas for AWE/cruelty prevention interventions**

Q10 Which of the areas above do you feel should be the **top three priorities** that interventions for children/young people should aim to tackle? Please choose three and rank them

	Statement	1	2	3	% agreement
1	Lack of knowledge/understanding of animal needs, unintentional cruelty & neglect, including cruelty through kindness (eg obesity) & proliferation of misinformation/myths	12	5	0	65.4
2	Taking responsibility for the animals in our care. This includes both self-awareness (understanding our own impact on animals) & awareness of animal-related issues in society. Stimulating a desire to improve the lives of animals & the conditions we create for them	5	6	3	53.8
3	Skills with animals, ensuring appropriate & safe behaviour/handling, enhancing understanding of animal communication/behaviour, & the ability to identify when a need is not being met	4	1	5	38.5
4	Understanding animal sentience & the psychological welfare of animals	1	5	5	42.3
5	Prevention of, and appropriate responses to, intentional cruelty	1	2	2	19.2
6	Recognising conflicts/contradictions in the ways humans treat/use different types of animal, challenging animal stereotypes & ways animals are often (mis)used for our entertainment or pleasure	1	3	1	19.2
7	Enhancing empathy & respect for animals	1	3	6	38.5
8	Understanding the bigger picture = the inter-relationships between humans, animals & the natural world	1	1	4	23.1

436 1 = number one priority, 2 = second area to prioritise, 3 = third priority area

437

438 Between 80.8 and 100% of participants (medians between 1 & 2) agreed on the 12 key target
 439 groups for AWE/cruelty prevention interventions (Q11). Table 5 lists these groups with the
 440 exception of 'age and developmentally appropriate responses and interventions should be
 441 available for everyone' (100% of participants agreed with this statement, medians between 1
 442 & 2). When asked to pinpoint the top three priority targets (Q12 Table 5), the only group
 443 participants agreed on was 'at risk' groups. However, when combining the scores for any

444 school-age group, it was clear that this was also a priority that links to a desire expressed by
 445 many that animal welfare should be part of the curriculum.

446

447 **Table 5: Participants' views on priority target groups for AWE/ cruelty prevention interventions**

Q12 If you had to prioritise, **which three groups** would you choose to target? Please choose three and rank them

	Statement	1	2	3	% agreement
1	All school age children/young people	10	3	4	65.4
2	- All primary age pupils	2	1	0	11.5
3	- Children in pre-school/ nursery/early primary school (infants)	0	1	0	3.8
4	- Children in late primary school (juniors)	5	0	0	19.2
5	- Secondary age children/young people (teenagers)	1	1	2	15.4
	<i>* Combined total for those choosing school age children categories</i>				96.2
6	Tertiary education students (veterinarians, law, sociology, psychology)	1	1	0	7.7
7	At risk groups - children/young people who have suffered adverse life experiences, witnessed or experienced abuse, or not had the best start in life	1	9	5	92.3
8	Children/ young people who have harmed animals	4	4	4	46.2
9	Children/young people from areas of high deprivation	0	1	1	7.7
10	Parents	1	2	4	26.9
11	Young offenders & areas that have a high level of prosecutions or animal welfare issues	1	3	6	38.5

448 1 = number one target group, 2 = second group to prioritise, 3 = third priority group

449

450 **(3) Components of successful interventions**

451 When asked to what extent they agreed with the statements in Table 6 about components that
 452 are most critical to the success of an intervention (Q11), between 81 and 100% of participants
 453 agreed with six statements (medians = 1 or 1.5). The only component participants did not agree
 454 on was having the direct presence of an animal or video footage/practical demonstrations (65%
 455 agreement, median = 2). When asked to decide on the three most critical components (Q12
 456 Table 6), consensus was only evident for ‘methods that ensure active learner participation/
 457 engagement’.

459 **Table 6: Participants' views on the three most important components of successful interventions**

Q12 Which three of these do you feel are most critical to the success of an intervention? Please choose three and rank them.

Statement	1	2	3	% agreement
1 Opportunities to hear about, & reflect on, real life scenarios/ case studies	3	3	1	26.9
2 Presence of/ direct involvement with an animal or use of videos/ practical demonstrations to observe & practice skills	3	1	2	23.1
3 Tailoring content/ approach to local needs, issues or learning styles	3	3	4	38.5
4 Age/ developmentally appropriate	1	6	4	42.3
5 Methods that ensure active learner participation/engagement – interactive & fun sessions (eg using debates, discussions, campaigning, Q&A, critical thinking/problem solving, role play)	10	6	6	84.6
6 An empathic, sensitive, positive educator/facilitator with a sound understanding of the recipients of the intervention & the reasons underlying behaviours, who can build a relationship with the children/young people (particularly where cruelty is involved)	4	6	6	61.5
7 Multiple sessions & reinforcement of learning	2	1	3	23.1

460 1 = most important component, 2 = second most important, 3 = third most important component

461

462 With regard to the five statements on the importance of structure in interventions (Q13, Table
 463 7), consensus was only achieved in relation to two of them: (a) it can be important but flexibility
 464 is crucial (this statement resonated most with participants), and (b) it being important that
 465 sessions are structured to allow a relationship to develop. There was much emphasis in Round
 466 1 on flexibility and adapting to the group or individuals taking part in the intervention.

467

468 **Table 7: Participants' perceptions of the importance of structure**

Q13 To what extent do you agree with the statements below about the importance of having a particular structure to the way animal welfare education/cruelty prevention interventions are designed & delivered?

Statement	Median (1-5)	% agreement	% selecting statement that resonates most
-----------	--------------	-------------	---

1	Structure is extremely important (educationally/developmentally); each session should build on, & reinforce, prior knowledge. Structure is also important in terms of the order in which you introduce topics, methods or live animals to children/young people	2	65.4	19.2
2	Having a carefully planned structure is necessary for consistent delivery & effective monitoring/evaluation of impact	2	73.1	11.5
3	It is important that sessions are structured in a way that allows a relationship to develop with participants. Ideally, interventions would involve seeing participants multiple times, but this is difficult to achieve in practice	2	76.9	7.7
4	Structure can be important, but depends on who you are working with. The intervention needs to have flexibility to adapt to individuals, groups, or the particular behaviour/s we want to target	1	88.4	53.8
5	Having a particular structure is not important – you need to start where the learner is, be flexible & tailor the intervention to individuals	2.5	50.0	7.7

469

470 Q14 asked participants to rank the 7 groups identified in Round 1 as the people most able to
 471 effectively facilitate an intervention programme for children/young people. They had to rank
 472 them in order of preference, from ideal (1) to least preferable (7). Consensus was calculated
 473 based on the top three rankings (see Table 8), and was only achieved in relation to one of the
 474 groups – animal professionals who are skilled educators.

475

476

477

Table 8: Participants' perceptions of the ideal facilitators

Q14 Please tell us who you feel is most able to effectively facilitate an AWE/cruelty prevention intervention programme for children/young people (ie the person or people who interact with the children/young people & deliver the programme elements). Please rank the following

Facilitator	Median (1-7)	% agreement ¹
1 Teachers/skilled educators	2.5	69.2
2 Animal welfare experts	4	38.5
3 Animal professionals who are skilled educators	2	92.3
4 Mental health professionals/social workers/ support workers	5	20.8
5 Those with a youth work background	5	7.7
6 An inter-disciplinary team whose members collaborate & support each other	2	69.2
7 Volunteers	7	3.8

478

¹ % agreement calculated based on top 3 choices

479

480 By contrast, there was strong consensus on the personal or professional skills necessary to be
481 an effective facilitator of interventions for children/young people (Q15). Between 92.3 and
482 100% (medians = 1) felt an effective facilitator should: have experience working with animals
483 or passionate about animals; experience working with children/young people; be inspiring/
484 engaging; a good communicator who is flexible/adaptable to different audiences; sufficiently
485 well-trained/knowledgeable, and have good interpersonal skills (friendly, empathic, patient,
486 non-judgmental, sense of humour).

487

488 (4) *Anticipated outcomes*

489 Between 92 and 100% of participants agreed on the eight main changes they would like to see
490 in children and/or young people as a result of participating in an AWE/cruelty prevention
491 programme (medians = 1 or 2). However, when asked to decide on the top three priorities, there
492 was no consensus on what these should be (Q16 Table 9). Knowledge and skills, alongside
493 sustained behavioural change were the areas of strongest agreement.

494

495 **Table 9: The main changes participants would like to see in children/young people**

Q16 Which three changes in children/young people would you most like to see as a result of participating in an AWE/cruelty prevention intervention? Please choose three and rank them					
Statement	1	2	3	% agreement	
1 Improved knowledge/understanding of animal welfare needs & issues	9	3	2	53.8	
2 Greater recognition of animal sentience	0	1	5	23.1	
3 Improved skills in relation to interpreting animal behavioural signals & responding appropriately, handling animals correctly (fewer intrusive/forceful/rough handling behaviours), recognising poor welfare & cruelty, & knowing how to behave safely around animals	7	6	2	57.7	
4 Improved empathy & compassion towards animals	2	4	4	38.5	

5	Improved empathy towards others generally (improvement in pro-social behaviours)	0	2	3	19.2
6	Greater recognition of responsibility & an appreciation of their own impact on animals – increased self-awareness & self-reflection, & feeling more empowered to take action	3	3	2	30.8
7	Being more respectful of, & improved attitudes towards, animals	1	4	2	26.9
8	Sustained behavioural change & reduced incidence of children harming animals or being harmed by animals	4	3	6	50.0

496 1 = most important change you would like to see, 2 = second most important, 3 = third most important change

497

498 Consensus was only achieved in relation to one of five statements about how successful current
 499 AWE/cruelty prevention interventions are (Q17): that it is difficult to establish success due to
 500 limited research evidence and difficulty assessing long-term impact (Table 10). However, in
 501 terms of the statement that resonated most, the same proportion of participants (35%) chose
 502 the statement about interventions being extremely successful if delivered properly.

503

504 **Table 10: Participants' views on the degree of success of current interventions**

Q17 Please show us the extent to which you agree with the following statements about how successful current AWE/cruelty prevention interventions for children/young people are in achieving the changes you would like to see

Statement	Median (1-5)	% agreement	% selecting statement that resonates most
1 I think they are extremely successful if delivered correctly, ensuring children are engaged interactively. Some are very good at increasing knowledge. Anecdotally, work with individuals is very successful	2	65.4	34.6
2 It varies depending on the content, quality and mode of delivery. There is often a lack of investment and time given to interventions, & a one-off or ad-hoc session will never have the impact of a series of sessions	2	73.1	19.2
3 I find it difficult to establish how successful they are because some are not evaluated effectively & there is little research evidence. It is hard to assess the impact long term (& difficult to attribute to an individual intervention)	2	77.0	34.6
4 In general I do not see much success. Interventions are lacking & I think cruelty may be increasing not decreasing.	3.5	150.0	3.8

I don't think current interventions are dealing with negative influences with respect to animal welfare (culture, social media & gaming)

5 I am not sure. They are definitely not successful enough 3.5 150.0 7.7

505 ¹ Reverse scored, as more people disagreed than agreed with these statements, indicating that half the participants think
506 interventions are successful.

507

508 In terms of perceived gaps in current provision (Q18), there was strong consensus with
509 respect to the notion that AWE should be embedded within the school curriculum (96%
510 median = 1), and that teenagers/secondary school age students (85% median = 2), as well as
511 at risk/vulnerable children/young people (85% median = 1.5), are neglected groups. There
512 was no consensus on whether animal welfare/cruelty prevention not being currently
513 recognised as important in society reflects a gap in provision (69% median = 2), or the lack
514 of skills-based education (54% median = 2). 58% felt they were aware what the gaps were in
515 current provision, leaving 42% unsure. 73% (close to our cut-off point) chose AWE being
516 part of the curriculum as the gap that should be prioritised. Participants often commented on
517 this question and it was evident how strongly many felt about the importance of embedding
518 this area within formal school education.

519

520 Of the six statements relating to perceptions of who animal welfare education/cruelty
521 prevention interventions currently work best for (Q19), there was 100% agreement with the
522 statement that everyone benefits from understanding more about animals and their needs (Table
523 11). There was also consensus that current interventions work best for those who are re-visited
524 multiple times and therefore have long-term engagement with a programme. No consensus was
525 achieved for the remaining four statements. Just over half the participants were unsure who
526 they work best for.

527

528 **Table 11: Participants' views on who animal welfare interventions currently work best for**

Q19 Please show us the extent to which you agree with the following statements about who animal welfare education/cruelty prevention interventions currently work best for

Statement	Median (1-5)	% agreement
1 Currently, they work best for young children (primary age and under), especially those who are engaged/interested	2	69.3
2 Those who have been abused or neglected themselves and not had opportunities to experience positive relationships & learn how to be compassionate	2	65.4
3 Everyone benefits from understanding more about animals & their needs	1	100.0
4 People who are already positive about animals & want to learn more	2	73.0
5 Those who have long-term engagement with interventions (are re-visited multiple times)	2	76.9
6 I am not sure who animal welfare education/cruelty prevention interventions work best for	3	46.2

529 ¹ Reverse scored, as more people disagreed/strongly disagreed than agreed with this statement

530

531 **(5) Evaluation of animal welfare education/cruelty prevention interventions**

532 There was consensus on half of the statements relating to the ease/difficulty of measuring
 533 desired changes in children (Q20 Table 12). There was strong agreement that knowing how to
 534 measure impact is a significant challenge for most animal welfare organisations, and that it is
 535 possible to measure immediate impact, but far more challenging to assess whether changes are
 536 sustained in the longer-term. 81% of participants also agreed that if working closely with
 537 individuals over time, it is easier to see and track change. Some practitioners work on a one-
 538 to-one basis or with small groups over a period of time and they described how changes in
 539 individuals can be observed, but not necessarily captured using standardised measures (see
 540 Muldoon & Williams under review). There was no consensus on the difficulty of measuring
 541 changes they would like to see, the straightforwardness of measuring knowledge, attitudes, or
 542 beliefs using pre- and post-tests, or successful measurement being dependent on working with
 543 academic partners.

544

545 **Table 12: Participants' views on the measurement of desired changes/outcomes**

Q20 How easy or difficult is it to successfully measure/capture desired changes/ outcomes in children and young people? (Please indicate your degree of agreement with the following statements)

	Statement	Median (1-5)	% agreement	% selecting statement that resonates most
1	It is very difficult to measure the changes we would like to see. The most difficult challenge in this field is measuring the impact of interventions on behaviour – the ultimate outcome of putting knowledge, understanding, etc into practice	2	69.3	26.9
2	Understanding how to go about measuring impact is a significant challenge for most animal welfare organisations	2	80.8	19.2
3	We can measure immediate impact but it is far more difficult to assess whether changes are sustained in the longer term. It is also difficult to attribute long-term or population level changes to a particular intervention	1.5	84.6	30.8
4	It is relatively straightforward to measure impact in terms of knowledge gained and attitudes/ beliefs using pre- and post-test	3	46.2	7.7
5	If working closely with individuals over time, it is easier to see & track change. We can observe changes in children's behaviour & demeanour. However, this case-by-case analysis does not provide strong evidence	2	80.8	7.7
6	Being able to successfully measure change in children is only possible when education providers work closely with academic partners	2.5	50.0	7.7

546

547 Participants agreed with the majority of statements on the best ways of evaluating the
 548 effectiveness of interventions (Q21). There was a lack of consensus for two of the eight
 549 statements: the use of tailored child-centred methods; and knowing how to best evaluate
 550 interventions. Only 54% felt they had evaluation knowledge/expertise (Table 13).

551

552 **Table 13: Participants' views on the best ways of evaluating effectiveness of interventions**

Q21 Which of the following do you feel are the best ways to evaluate the effectiveness of animal welfare education/cruelty prevention interventions. Please indicate your level of agreement with each statement

	Statement	Median (1-5)	% agreement
1	Pre- & post-intervention assessments	2	77.0

2	Comparison of intervention groups with matched control groups who do not participate	1.5	92.3
3	A range of different approaches (quantitative and qualitative) & techniques to capture change, as well as gathering data from a range of sources	1	88.4
4	Child-centred methods that are tailored to the individuals/ groups participating	2	65.4
5	A longitudinal approach that shows long-term impact & sustained change, and monitoring change over time at population level	2	88.4
6	We need to be clearer on the outcomes – what we want to change – before working out how to measure those. It would be useful to develop indicators for behavioural change at the population level – the ultimate objectives of our interventions, then track progress towards those goals	1	96.2
7	Ideally, evaluations would assess actual behaviour & behaviour change, rather than just knowledge, attitudes, etc	1	88.5
8	I am not sure how to best evaluate the effectiveness of interventions	4	153.9

553 ¹ Reverse scored, as more people disagreed than agreed, indicates % knowing how best to evaluate effectiveness

554

555 There was consensus on two of six statements about the problems associated with evaluation
556 (Q22). 77% (median = 2) agreed that lack of time (for the charity/deliverer as well as
557 teachers/schools) was an issue, and 85% (median = 2) agreed it is difficult to measure impact
558 in the longer term (beyond immediate effects). Consensus was not achieved for the statements
559 relating to lack of expertise/skills in the field both in terms of intervention design and
560 measurement of impact (eg determining outcomes, evaluation techniques, methodologies,
561 measurement tools, analysis & reporting) (62% agreement, median = 2), small incomplete
562 datasets (58% agreement, median = 2), lack of willingness of families, or children/young
563 people to be involved in an evaluation, or they participate but are not engaged in the process
564 (42% agreement, median = 3). 39% were not sure they had much knowledge about problems
565 associated with evaluation.

566

567 Between 81 and 100% of participants agreed that all four types of support would be useful
568 when evaluating their own interventions (Table 14).

569

570 **Table 14: Participants' views on the kind of support that would be useful when evaluating interventions**

Q23 Please indicate the extent to which you agree with the following statements about the kind of support that might be useful to you when evaluating your own animal welfare/cruelty prevention interventions

	Statement	Median (1-5)	% agreement
1	An accessible guide to basic, good quality evaluation that will instil confidence in animal welfare educators	1	96.2
2	Guidance on ethics, funding, evaluation design, sample size, methods, approaches, materials, what to assess & how to measure, statistical analysis, recognising limitations, & communicating findings effectively	1.5	80.8
3	Examples of good practice & sharing knowledge/experience/materials	1	100.0
4	Expert support (university/research input), particularly for statistical analysis	1	96.2
5	I am not involved in developing interventions/evaluations, so cannot answer this question	5	169.2

571 ¹ Reverse scored, as more people disagreed than agreed with this statement

572

573 **(6) Terminology and definitions**

574 As a result of responses in Round 1, and as highlighted in our analysis of Q1 and Q8 at the
 575 beginning of the Results section, an additional question was added in Round 2. Participants
 576 were asked to reflect on the terms 'animal welfare education' and 'cruelty prevention' (Q24).
 577 Consensus was achieved in relation to four of the eight statements (Table 15).

578

579 **Table 15: Participants' views on the terminology used in the field**

Q24 This final question asks you to reflect on the terms 'animal welfare education' & 'cruelty prevention' - what the use of those terms means to you. Please read through the definitions below & indicate the extent to which you agree with each statement

	Statement	Median (1-5)	% agreement
1	Cruelty prevention is just another term for animal welfare education – they are synonymous	4	165.4
2	Animal welfare education is concerned with unintentional cruelty & 'universal approaches', cruelty prevention is concerned with intentional cruelty (actual or expected given the risk factors) & 'targeted approaches'	3	46.2
3	Animal welfare education is predominantly concerned with challenging myths & correcting a lack of knowledge/understanding of animal needs	2.5	50.0
4	I feel there are differing views on what constitutes animal welfare education	2	84.6

5	Cruelty can be intentional or unintentional, so both animal welfare education & cruelty prevention involve a range of different approaches	1.5	88.5
6	Cruelty prevention is only for those who have harmed animals or are at risk of doing so	4	180.8
7	I don't feel comfortable with the term 'cruelty prevention' – it has negative connotations	2.5	50.0
8	I feel there are differing views on what is meant by cruelty prevention	2	84.6

580 ¹ Reverse scored, so consensus calculated for those who disagreed/strongly disagreed with statement

581

582 Experts agreed that there are differing views on what constitutes both animal welfare education
583 and cruelty prevention, that cruelty can be intentional or unintentional so both AWE and CP
584 involve a range of different approaches, and that cruelty prevention is not just for those who
585 have harmed animals or are at risk of doing so. There was no consensus on whether AWE and
586 CP are synonymous (though more people felt they were not), or the idea that AWE is concerned
587 with unintentional cruelty and universal approaches, whereas cruelty prevention is about
588 (actual or expected) intentional cruelty and targeted approaches. There were also varying views
589 with respect to whether AWE is predominantly concerned with challenging myths and
590 correcting lack of knowledge/awareness. Half the sample felt this was the case. The same
591 proportion agreed they were not comfortable with the term 'cruelty prevention'.

592

593 **Discussion**

594 Here we draw together and reflect on the areas of consensus and discord that our study has
595 highlighted. These are discussed under five headings representing some core themes arising
596 from this analysis. Recognising that educator perspectives alone cannot help us to fully
597 understand how effective or long lasting any type of intervention might be, we view them as
598 critical to the establishment of a sound evidence base and shared knowledge to guide work in
599 the field.

600

601 *Lack of consensus on priorities - trying to tackle too much?*

602 While there was strong agreement with most of the statements across the whole study, there
603 was often a lack of consensus on the top three priorities. For example, while participants
604 concurred on all of the underlying causes of cruelty (the risk factors), there was no agreement
605 on the top three that interventions should address. Lack of education was the only area that
606 came to the fore, perhaps because practitioners feel most able to exert an influence here.
607 Similarly, there was consensus on the range of foci that should be covered in interventions, but
608 not on the areas to prioritise. This may be indicative of a difficulty in theorising the kind of
609 input that is most likely to eventuate in behavioural change.

610

611 With respect to identifying key target groups for interventions, all groups were considered
612 important, so there was strong recognition of the need for both universal and targeted
613 interventions. It is interesting to note that not all groups identified are covered by current
614 provision. Parents, and children who have harmed animals, for example, are rarely included by
615 charities offering interventions. There was a lack of consensus on target priorities (other than
616 school age and at risk groups). Participants also agreed on all the components of successful
617 interventions, with the exception of involving animals. This is important and likely due to
618 recent concerns about the welfare of animals used within educational or therapeutic
619 interventions (Animal-Assisted Intervention and Therapy). It also suggests the need for
620 alternatives to be developed (eg robotic or toy animals, virtual reality techniques, and high
621 quality video footage) as teaching aids. Again, there was no consensus on the components to
622 prioritise. This may point to difficulties in identifying which individual components matter
623 most.

624

625 Clearly many factors are involved and all need to be addressed, but it is important to
626 acknowledge and be realistic about the limitations of one intervention. From the perspective of
627 educational, motivational or behavioural change theories, interventions are likely to be most
628 successful at improving proximal outcomes. In time, and with reinforcement and extension,
629 these should lead to more distal outcomes (Hagelskamp et al 2013; Harden & Stamper 1999;
630 Schunk et al 2014). Behavioural change in particular is rarely immediate; various changes in
631 thinking and a coming together of different elements (eg attitudes, beliefs, perceptions of
632 behavioural norms, skill acquisition) are necessary before there is motivation to do something
633 differently and then act (Ryan 2009).

634

635 *Evidence of tensions around terminology*

636 There was no consensus on whether ‘cruelty’ is different from ‘neglect’ or if cruelty is
637 difficult to define, suggesting widely differing perceptions and degree of comfort with the
638 language used in the field. The inclusion of our additional question in Round 2 provides
639 stronger evidence in this regard. Half the sample agreed they were not comfortable with the
640 term ‘cruelty prevention’. There were many allusions in Round 1 to cruelty not being a useful
641 term to use in many situations (Muldoon & Williams under review) and that there are such
642 varied views on what that constitutes, that everyone has a different view of what AWE and
643 cruelty prevention are for. One participant compared this with the language that has been
644 used around domestic violence, and perhaps goes some way to explaining why there is
645 sometimes a reluctance to engage with the topic of ‘childhood cruelty to animals’. This has
646 significant implications for the common goal of incorporating animal welfare education into
647 the school curriculum where agreed terminology would be advantageous. We have begun to
648 use the word ‘harm’ to replace ‘cruelty’, but some practitioners suggest that only positive-

649 oriented language should be used denoting positive welfare; what helps animals to be happy
650 and healthy, what don't they like, and what makes them feel uncomfortable or worried?

651

652 'Animal welfare education' appears to engender the idea of correcting, or compensating for, a
653 lack of knowledge. Accordingly, it may be necessary to expand these terms (AWE and cruelty
654 prevention), or abandon them altogether in favour of 'Caring for Life' interventions (discussed
655 in our partner paper) that could more easily encompass positive and negative behaviours, and
656 not just be limited to catering for animals' basic needs. This would fit with the UNESCO four
657 pillars of education: learning to know, learning to do, learning to live together, and learning to
658 be. This resonates well with humane education approaches, and also reflects the observation,
659 that "society in most First World countries is changing its views and understanding of animals,
660 as well as its expectations for their care" (Beaver 2005 p 419).

661

662 To help embed animal welfare within UK school education systems, our terminology might
663 usefully focus on familiar/established terms. Examples include 'responsible citizenship',
664 'personal and social education' (PSE) or 'social and emotional learning' (SEL), 'science,
665 technology, engineering and maths' (STEM), though it is important to recognise that the
666 different approaches and curricula across the four home nations may afford different
667 opportunities for integrating AWE. This is clearly an area that needs to be given due attention
668 in partnership with teachers prior to presenting a case for curricular inclusion to local or
669 national governments. We recommend that experts develop a shared understanding as to the
670 terminology and definitions to be used in the field, either when discussing at a strategic level
671 or with intervention participants/stakeholders. Using different language with different
672 audiences carries the risk of misinterpretation or seepage. A transparent approach to defining

673 the issues at hand is crucial to ensuring engagement with a topic that can be viewed as
674 extremely sensitive.

675

676 *The need to be an animal welfare expert*

677 Related to Theme 2, another tension was apparent when examining responses to different
678 questions. There was no consensus on the ideal facilitators for the delivery of interventions,
679 with the exception of ‘animal welfare professionals who are skilled educators’. This is
680 particularly noteworthy, as it potentially thwarts the achievement of the strongly held shared
681 goal, where AWE would be delivered by class teachers. Whilst school teachers are trained child
682 educators, they do not necessarily have detailed knowledge of animals or their welfare.
683 Accordingly, this poses challenges in terms of understanding what is required by teachers if
684 they are to embrace the idea of covering AWE themselves. Government and education
685 authorities would need to be convinced of the value associated with its inclusion and confident
686 in teachers’ ability to deliver it. The best way to ensure receptivity and support for its inclusion
687 within schools is undoubtedly for AWE specialists to work closely with school teachers.
688 Ideally, interventions would be co-produced, drawing on both animal welfare expertise and
689 teachers’ knowledge of how children learn, effective pedagogy and mechanisms of change.

690

691 One advantage that should help with inclusion into school curricula is that “animal welfare
692 issues cross all educational disciplines” (Beaver 2005 p 421), and can therefore be interwoven
693 throughout different subject areas. In a secondary school system, this would be best achieved
694 through a structured approach where there is an overarching framework that spells out the
695 different topics/subject areas and the linkages between them, so that all teachers are working
696 towards the same goals and can see how their input fits into the bigger picture.

697

698 *Rejection of a 'one size fits all' approach*

699 Linked to the previous theme, there was little consensus with respect to the need for structure
700 and standardisation. Within both the UK education system and evaluation research
701 methodology, structure is considered fundamental. Yet, there appear to be significant
702 concerns about having a strong structure and a 'one size fits all' approach. Instead animal
703 welfare professionals feel that interventions need to be tailored to particular groups or
704 individuals and be flexible to change. Whilst intuitively this seems very important, it does
705 pose significant challenges with respect to high quality monitoring and evaluation. Indeed,
706 this issue is recognised by many of the AWE experts. When asked to what extent they felt
707 current interventions were successful, the only statement participants agreed on was that it is
708 difficult to assess because many interventions are not evaluated effectively, there is little
709 research evidence, and long term impact is difficult to measure.

710

711 The professionals in this study appeared to draw a strong distinction between a universal and
712 a tailored flexible approach. However, they are not necessarily mutually exclusive. Animal
713 welfare organisations might usefully draw on educational/cognitive developmental theory
714 and the skills of teachers to understand the significance of components that are critical to the
715 learning experience (Ormrod et al 2019; Pritchard 2018; Schunk 2019). Ideally, animal
716 welfare organisations would develop a coherent structured approach and then differentiate
717 where needed. This is important for monitoring and evaluation, and thus securing funding,
718 because it is not easy to evaluate a completely flexible bespoke programme and produce
719 strong evidence.

720

721 *Improving behavioural outcomes & measuring impact – setting realistic and achievable goals*

722 There was much within the study to suggest that those working in the field have a certain level
723 of frustration with the difficulty in being able to both effect change in, and measure,
724 behavioural outcomes. The ultimate goal of all intervention work is to eliminate animal
725 suffering in all its forms. However, this cannot be achieved through one intervention or by one
726 organisation alone. It is necessary to break down broad long-term goals into a series of steps.
727 Framing their own programme/s in terms of stages and viewing them in the context of wider
728 work within the field might help organisations to see the value and contribution of their own
729 work no matter how small. By the same token, if all organisations followed a similar
730 standardised approach to developing an intervention, alongside common evaluation tools and
731 approaches, it would be far easier to ascertain progress and identify required changes.

732

733 At the moment, it is not clear if those working in this area are confident that their programmes
734 are making a difference. This is regrettable given the amount of hard work being carried out.
735 There was a high degree of uncertainty not just around how to assess the overall success of
736 interventions, but also who current interventions work best for and what the gaps in provision
737 are. Practitioners can see the effects they have at an individual level and can recount success
738 ‘stories’ (see Muldoon & Williams under review). This is encouraging and the illustration of a
739 programme’s impact through a participant’s story can be extremely powerful. However, there
740 is a need to identify the broader impact, for whom a programme works (or doesn’t work), and
741 what it is about the programme that leads to positive outcomes – which elements are important
742 and can feed into other interventions to maximise impact.

743

744 Most educational, psychological and healthcare interventions are evidence-based and informed
745 by theory with respect to behaviour change, stages in the learning process, or motivational
746 approaches and techniques. This helps professionals to develop their own models for practice.

747 It is important that these models are tightly focused and not all-encompassing. With respect to
748 AWE interventions, educational and psychological theory (and the input of teachers) may
749 support a narrowing down of objectives and anticipated outcomes, as well as appropriate
750 content and pedagogy. The ‘spiral curriculum’ (Bruner 1960) is likely to be a familiar concept
751 to those working frequently within schools, whether or not they describe it as such. This refers
752 to an iterative re-visiting of topics over time, not just repeating what has already been taught,
753 but deepening knowledge, with each learning encounter building on, and directly linked to, the
754 previous (Harden & Stamper 1999). Delivered effectively this should lead to enhanced
755 outcomes. However, for those who only visit any given group of children or young people
756 once, the identification of a model that works perhaps appears more challenging. The principles
757 of reinforcing and testing knowledge gains can still be applied, but organisations should not
758 seek to match the goals of those able to do more intensive and/or long-term work. Thinking
759 ‘small’ and being focused on key messages are crucial here.

760

761 *Limitations of the study*

762 One limitation is that this study combined consideration of ‘animal welfare education’ and
763 ‘cruelty prevention’. These are both common terms in the field and our study has shown that
764 many participants treat these as part of the same endeavour and use these terms
765 interchangeably. ‘Cruelty’ is embedded in the charities’ work and sometimes in their name (eg
766 SPCAs - Societies for the Prevention of Cruelty to Animals). However, there are equally as
767 many that view these areas very differently. To carry out the study in a way that asked these
768 crucial questions about AWE and cruelty prevention separately would have been unfeasible.
769 Moreover, asking participants to consider interventions in the broadest sense has produced an
770 unanticipated finding that is foundational to the field – the assumptions that underlie the
771 development of interventions are wide and varied. There are clearly different ways of

772 interpreting ‘animal welfare education’ and ‘cruelty’/‘cruelty prevention’. Without a shared
773 language where meanings are agreed upon, understood and communicated within and beyond
774 the field, it will be difficult for practitioners to learn from each other and ensure interventions
775 are designed in such a way that they are targeting the right people and producing the intended
776 outcomes. Further evaluation research is also required, as well as studies that assess the type
777 and effectiveness of programme content and pedagogy currently being employed within
778 AWE/cruelty prevention interventions.

779

780 This study also broadly reflects a mainly UK perspective. Only four participants were working
781 predominantly in the US or Canada although three, while UK based, had worked in Asia and
782 Africa. We cannot draw any strong conclusions either with regard to views on how AWE might
783 need to take account of different ethnic and cultural groups or urban/rural locality. However,
784 our partner paper (Muldoon & Williams under review) highlights the views of those in our
785 sample who were working internationally, considering the contribution their thinking might
786 make to embedding education in UK school curricula.

787

788 *Animal welfare implications and conclusion*

789 The aim of this study was to understand and document expert views on animal welfare
790 education/cruelty prevention interventions, establishing where there is consensus on the best
791 ways of working in this field, and where there is discord or tension. This was undertaken in
792 order to facilitate the development of an overall framework for guiding policy, practice, and
793 future research agendas in the field of animal welfare education and childhood cruelty to
794 animals. Importantly, it has been used to develop a toolkit (see Muldoon & Williams under
795 review), providing advice and step-by-step guidance on how to develop an intervention and
796 evaluation, including examples of established evaluation techniques and measures.

797

798 We also anticipate opening up discussion within the AWE community with regard to the
799 tensions and discord we have identified. These undoubtedly need to be understood and
800 addressed if the goal to integrate animal welfare into school curricula is to be achieved.
801 Learning from each other is critical to ensuring the long term success of interventions, just as
802 research benefits significantly from interdisciplinary collaborations across different fields and
803 between academics and practitioners. In the area of animal welfare, these collaborations are in
804 their infancy, though there are some examples of established and productive partnerships. This
805 study suggests that the most fruitful collaboration is likely to be between animal welfare
806 organisations and school teachers, each helping to upskill the other and establish a common
807 language and approach. It is essential that all those working to enhance the lives of animals and
808 children capitalise on opportunities to collaborate, so that “in the future, integrated research
809 projects [and interventions] including child psychology, veterinary, medical, educational and
810 other social sciences can be developed as a result of these efforts and produce research [and
811 intervention programmes] with impact” (Meints et al 2018 p 11).

812

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814

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