

Establishing consensus on the best ways to educate children about animal welfare and prevent harm: An online Delphi study

JC Muldoon* and JM Williams

Caar (Children, adolescents and animals research), Clinical & Health Psychology, University of Edinburgh, Doorway 6, Medical School, Elsie Inglis Quad, Teviot Place, Edinburgh EH8 9AG, UK

* Contact for correspondence: janine.muldoon@ed.ac.uk

Abstract

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

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

Introduction

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

Animal welfare education (AWE)

There is a great deal of work being undertaken to help children and young people learn more about animals, with the goal of reducing (and ultimately eradicating) the incidence of animals being harmed. In the UK, this usually takes place under the banner of ‘animal welfare education’ or ‘cruelty prevention’ and is often designed and delivered

by animal welfare organisations. The focus is usually on preventing accidental/unintentional harm rather than deliberate cruelty, as the majority of cases seen by charities are due to neglect or mistreatment because owners do not know how (or are struggling) to care for their animals appropriately (Vermeulen & Odendaal 1993; Scottish Society for the Prevention of Cruelty to Animals [SSPCA] 2020). Some organisations, like the SSPCA (in Scotland) and the Royal Society for the Prevention of Cruelty to Animals (RSPCA) in England/Wales, work inclusively and take a universal approach to their educational interventions. However, there are other organisations and specific interventions that target particular groups of young people, either because they are identified as being more likely to cause harm to animals (eg links with criminality or domestic abuse/neglect), and/or because they might benefit psychologically and behaviourally from understanding more about animal welfare. Examples include the SSPCA’s ‘Animal Guardians’ programme and the RSPCA’s ‘Breaking the Chain.’

While AWE interventions are highly varied and sometimes include direct interaction with animals (eg Nicoll *et al* 2008), this is becoming less common due to concerns about child

safety and the welfare of any animals involved. Interventions can be short or long term, have one-off or multiple sessions. Some involve working with a small number of children/young people quite intensively, while others are less targeted, more universal, and are rolled out to the same age groups in schools, year-on-year, in order to maximise reach.

Evidence-based interventions

Unfortunately, few AWE interventions have been scientifically evaluated, and there is no evidence-based guidance for organisations seeking to develop an educational intervention programme. Equally, there is limited evidence to persuade potential funders to support this work. There are some evaluation studies that have examined the impact of interventions on children and young people. In the US, for example, improvements in attitudes towards the treatment of animals following humane education programmes have been found in fourth grade children (Ascione & Weber 1996; Samuels *et al* 2016). The former study found long-term improvements (one year later) in positive attitudes towards animals and human-directed empathy as a result of participating. In Mexico, studies have shown positive effects of animal welfare programmes on first grade children's welfare knowledge (Aguirre & Orihuela 2010), and increases in eight to ten year old children's knowledge of, and attitudes towards, farm animals (Lakestani *et al* 2015). In Italy, Mariti *et al* (2011) evaluated a classroom-based intervention for nine to eleven year old children on pets and found improvements in welfare knowledge, fear of animals, and responsibility. UK-based research has also shown increased knowledge and higher endorsements of positive behaviours in 13 and 14 year olds following an educational event on the welfare needs of chickens (Jamieson *et al* 2012). One-off animal welfare workshops with primary school children, developed by the SSPCA and linked with the Scottish 'Curriculum for Excellence', were also effective in improving children's knowledge of animal welfare needs, but they appeared not to influence attitudes towards animals or attachment to pets (Hawkins *et al* 2017a).

More recently, digital AWE interventions (relating to pets and farm animals) have been evaluated for primary school children in the UK, revealing welfare knowledge gains, enhanced belief in animal minds, and attitudinal changes concerning the (non) acceptability of animal cruelty (Hawkins *et al* 2019, 2020). These studies suggest that the more interventions actively engage children in learning, the greater the learning outcomes are likely to be. However, it is also important to note that immediate improvements are not necessarily retained when children are tested at a later date (eg Coleman *et al* 2008). At present, there are few evaluations that use delayed post-tests or that assess current practice in schools. Most interventions have been developed specifically for research and have taken place across a range of cultural contexts. As such, there is likely to be wide variation in terms of the curriculum and pedagogy involved. Similar concerns about the lack of an evidence base have been expressed in relation to the rapidly growing use of animal-assisted interventions or therapy in health and social care

(AAI and AAT), an area that is largely unregulated in the UK. Ratschen and Sheldon (2019) argue that we can conclude little about their effectiveness and their continuity rests on:

...little more than [promising] potential. Given the relative lack of evidence-based protocols and standards, we are unlikely to be maximising therapeutic benefit, minimising harm, or upholding ethical standards for both humans and animals [p 2].

They go on to argue that any studies or full randomised trials are methodologically weak, lacking well-designed control conditions. Neither are interventions standardised nor reproducible. Ratschen and Sheldon also draw attention to the lack of detailed investigation with respect to identifying the mechanisms underlying animal-assisted interventions, an issue we return to below.

In the US, there have been calls to determine best practice in humane education through rigorous and methodologically sound evaluation research (Arkow 2006; Arbour *et al* 2009; Tardif-Williams & Bosacki 2015). Humane education is broader than AWE and defined as:

...a form of character education that uses animal-related stories, lessons, and activities to foster respect, kindness, and responsibility in children's relationships with both animals and people [Faver 2010; p 365].

More recently, this has extended to concern for the environment, emphasising the interconnectedness of animals, people and the planet, promoting the idea that children can become 'guardians of the earth' (Rule & Zhanova 2014). Like AWE in the UK, programmes vary in terms of content and pedagogy, but most focus on:

...instilling, reinforcing, and enhancing young people's knowledge, attitudes, and behaviour toward the kind, compassionate, and responsible treatment of human and animal life [Ascione 1997; p 60].

In the current climate of heightened awareness of human destruction of the natural environment and its associated consequences, these concepts are increasingly coming to the fore. Yet, we have little evidence to draw upon either from the UK or beyond. How might we intervene to ensure the best possible reciprocal relationships between humans and animals?

Ensuring quality and assessing mechanisms

Teaching children about animal welfare may well be the definitive way to improve the welfare of animals (Hawkins *et al* 2017a), as they are both the consumers of the future and growing up with a different set of values and influences from the children of the past. It is often assumed that living in an increasingly digitised and urban world has led to people becoming disconnected from nature (Kesebir & Kesebir 2017). However, global concerns may have awoken or renewed an appreciation of our natural surroundings and how to care for them. There have been numerous initiatives designed to re-connect people (children especially) with nature and improve mental health. Simultaneously, there has been growing awareness of the need for sustainable and ethical food, farming, and environmental practices. The restrictions imposed by the 2020/21 global COVID-19 pandemic might also have led people to recognise the significance of human-animal relationships for human health.

Alongside an educational emphasis on understanding the plight of others and young people's recent involvement in environmental campaigning/activism, children today may be more likely than their earlier counterparts to be receptive to the idea of being a 'guardian of the earth' or an 'animal guardian.'

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

By basing animal welfare education on theory and research [such as attitude and behaviour change models as well as child development and attachment models], we can start to build theoretically driven logic models for our interventions, which may lead to more successful outcomes and effective changes in child-animal interactions [Hawkins *et al* 2017a; p 254].

While the evidence base relating to child-animal interactions is still relatively small, it is growing. However, hardly any research has specifically addressed the issue of harm caused deliberately by children. According to Hawkins *et al* (2017b), only ten studies had been published since 2011, and research has typically been retrospective, including adults rather than children (Hawkins & Williams 2016). Accordingly, we have more knowledge about how to develop better understanding of animals and the prevention of unintentional harm. There is a lot more work to be undertaken to understand and respond to negative attitudes and intentionally harmful behaviours. A recent review of 32 studies examining the relationship between animal cruelty and interpersonal violence (Longobardi & Badenes-Ribera 2019) suggests a strong connection between harm caused to animals in childhood/adolescence and other forms of violent and antisocial behaviours, both at the time, and later in life. In particular, recurrent bouts of harming animals during childhood significantly predicted perpetration of interpersonal violence in adulthood. Specialist programmes are clearly required in these circumstances (eg 'AniCare® Child': Shapiro *et al* 2014).

In short, in order to enhance AWE for children and young people, we need to identify how organisations are putting their programmes together and the extent to which interventions are based on a theoretical model defining the mechanisms by which intended learning and behavioural outcomes will be achieved. Animal welfare professionals working with children may not have had any formal teacher education or a research (monitoring/evaluation) background, so they may need support to develop their skills and resources (Muldoon *et al* 2012). The study described in this paper is the first to consult expert practitioners in the field in order to build a strong source of support. Here, we focus on areas of consensus and discord with respect to the design, implementation and evaluation of AWE interventions. Our partner paper

(Muldoon & Williams 2021; this issue) provides a more in-depth assessment of practitioner perceptions and challenges, with an eye to the future development of AWE in the UK.

Materials and methods

Online Delphi and participant recruitment

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

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

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

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

- I confirm that I have read and understood the information provided, via email, for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

Table 1 Delphi participants' current roles (Round 1).

Role	N
Head of Animal Welfare Education	9
Education Officer	8
Education Programme Co-ordinator/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 and 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
Total	39

- I understand that my responses will be made anonymous to other members of the panel.
- I understand that my participation is voluntary and that I am free to withdraw from the study and request the removal of my data at any point during the study.
- I understand that the researcher will hold all information and data collected in a secure and confidential manner.

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

- The need for AWE/cruelty prevention programmes/interventions;
- Priorities and ideal target groups;
- Components of successful interventions;
- Anticipated outcomes; and
- Evaluation of interventions.

Participants were also asked how many animal welfare/cruelty prevention intervention programmes (aimed at children/young people) they were directly involved with at the time (June–September 2019). If they were happy to share information about their own programmes/interventions, they were asked about each one at the end of the survey (a combination of multiple-choice and open-ended questions). Data relating to participants' own interventions, as well as the challenges described by participants, are the focus of our partner paper (Muldoon & Williams 2021; this

issue). We also asked participants to provide an email address that could be used to maintain contact. Emails were only sent either to individuals or using blind copy and only the two authors had access to the data. Quantitative data were exported with no identifiers into an Excel® spreadsheet, while qualitative data were extracted into separate word documents to examine responses question-by-question. These were stored on the University's secure server (OneDrive) with no identifying information.

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

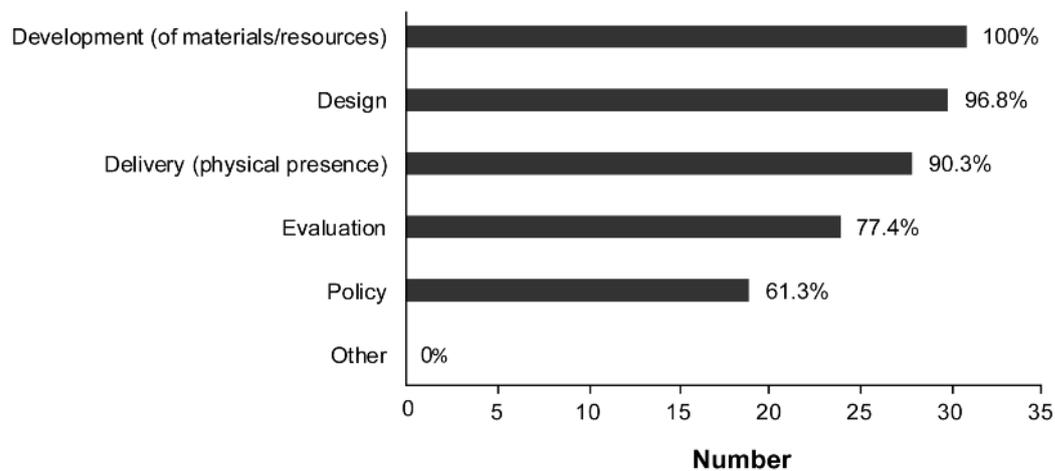
The Round 2 survey (administered January/February 2020) comprised mostly close-ended multiple-choice questions. The majority used five-point Likert scales to assess extent of agreement with a statement or the degree to which they felt the identified issue was important. A number of questions asked participants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

Participants

In total, 22 representatives from the 36 UK organisations targeted took part (61%). Eighty-five percent of the SAWEF group ($n = 13$) participated. Only two members did not take part as they felt on the periphery of AWE/cruelty prevention and had limited experience of interventions, so we achieved 100% of valid participants. Forty-eight percent ($n = 11$) of the 23 organisations involved in the wider AWEA participated. Through advertisement, seven further organisations contributed, including four outside the UK. Of the 31 professionals who took part in Round 1, 26 also completed Round 2 (84% response rate).

Participants were from 25 different animal welfare organisations in total. The majority were charities. Eighty-seven percent were based in the UK ($n = 27$), with 52% ($n = 14$) of those situated in Scotland (45% of the whole sample). Four participants were based in either the United States ($n = 2$) or Canada ($n = 2$). The majority (87%) were female ($n = 27$), (males: [$n = 4$]), with their ages ranging from 21–29 (7%) to 60+ (8%); the majority (45%) falling into the 30–39 age category. The roles they currently occupied are outlined in Table 1. Twenty-nine percent were Heads of

Figure 1



Participants' direct involvement in their organisation's intervention programmes.

Animal Welfare Education, and 26% Education Officers. Some held multiple roles, hence the total being larger than the sample size.

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

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

Analysis

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

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

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

In practice, we assumed consensus if at least 75% of the participants chose 1 (Strongly agree) or 2 (Agree) for each statement. There were a few questions where more people disagreed than agreed. In these cases, and as indicated within the tables in the *Results* section, degree of consensus was ascertained through calculating the percentages who chose 4 and 5 (Disagree/Strongly disagree). Where participants had to rank items in order of importance, we calcu-

Table 2 Participants' definitions of 'cruelty' to animals.

Q1 In Round 1, we asked participants to define 'cruelty' to animals. Please show 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

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

Results

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

(I) The need for AWE/cruelty prevention programmes/interventions

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

Subsequently, participants were asked the extent to which they agreed with the statements in Table 3 about why children/young people are cruel to animals (Q2). Participants highlighted these as risk factors in Round 1. There was consensus that all of these were underlying causes, with some recognition that a child's behaviour (i) cannot be 'divorced' from the immediate environment they

find themselves in (particularly the family environment), and (ii) can signal vulnerability. However, when asked which three causes are most important to address in interventions (Q3), participants only agreed on the lack of education (poor knowledge of animal welfare needs and sentience). Ninety-two percent ranked this in their top three; 15 participants ranking it first, two second and seven third.

When asked how important it was to teach children/young people about animal welfare (Q4), and provide a justification for their response (Q5), there was 100% agreement (medians = 1) on two statements: (i) 'it contributes to (is a vehicle for promoting) the development of vital life skills, fostering empathy, compassion, self-understanding and prosocial behaviour', and (ii) 'it is important because animal welfare, public health, human well-being and the environment are intrinsically linked. Learning about animal welfare should also contribute to increased concern about all sentient beings and the wider environment in which we live.' There was also strong agreement (all median scores = 1) that it:

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

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 and 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 cannot 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

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

(2) Priorities and ideal target groups

When asked which areas should be priorities for interventions (Q9), between 88 and 100% of participants (medians = 1 or 1.5) agreed that interventions should tackle the eight key issues highlighted in Table 4. However, when asked to decide on the top three priorities (Q10), as Table 4 shows, there was no consensus on what these should be.

Between 80.8 and 100% of participants (medians between 1 and 2) agreed on the 12 key target groups for AWE/cruelty prevention interventions (Q11). Table 5 lists these groups with the exception of 'age and developmentally appropriate responses and interventions should be available for everyone' (100% of participants agreed with this statement, medians between 1 and 2). When asked to pinpoint the top three priority targets (Q12; Table 5), the only group participants agreed on was 'at risk' groups. However, when combining the scores for any school-age group, it was clear that this was also a priority that links to a desire expressed by many that animal welfare should be part of the curriculum.

(3) Components of successful interventions

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

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

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

By contrast, there was strong consensus on the personal or professional skills necessary to be an effective facilitator of

Table 4 Participants' priority areas for AWE/cruelty prevention interventions.

Q10 Which of the areas below 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 and neglect, including cruelty through kindness (eg obesity) and 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) and awareness of animal-related issues in society. Stimulating a desire to improve the lives of animals and the conditions we create for them	5	6	3	53.8
3 Skills with animals, ensuring appropriate and safe behaviour/handling, enhancing understanding of animal communication/behaviour, and the ability to identify when a need is not being met	4	1	5	38.5
4 Understanding animal sentience and 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 and ways animals are often (mis)used for our entertainment or pleasure	1	3	1	19.2
7 Enhancing empathy and respect for animals	1	3	6	38.5
8 Understanding the bigger picture = the inter-relationships between humans, animals and the natural world	1	1	4	23.1

1 = number one priority; 2 = second area to prioritise; 3 = third priority area.

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
* Combined total for those choosing school-age children categories				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 and areas that have a high level of prosecutions or animal welfare issues	1	3	6	38.5

1 = number one target group; 2 = second group to prioritise; 3 = third priority group.

interventions for children/young people (Q15). Between 92.3 and 100% (medians = 1) felt an effective facilitator should: have experience working with animals or be passionate about animals; have experience working with children/young people; be inspiring/engaging; be a good communicator who is flexible/adaptable to different audiences; be sufficiently well-trained/knowledgeable, and have good interpersonal skills (friendly, empathic, patient, non-judgmental, sense of humour).

(4) Anticipated outcomes

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

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, and 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 and 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 and 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 and 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 and reinforcement of learning	2	1	3	23.1

1 = most important component; 2 = second most important; 3 = third most important component.

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 and delivered?

Statement	Median (1-5)	% agreement	% selecting statements that resonates most
1 Structure is extremely important (educationally/developmentally); each session should build on, and 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 and 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 and tailor the intervention to individuals	2.5	50.0	7.7

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 and deliver the programme elements). Please rank the following:

Facilitator	Median (1-7)	% agreement*
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 and support each other	2	69.2
7 Volunteers	7	3.8

* % agreement calculated based on top three choices.

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 and 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 and responding appropriately, handling animals correctly (fewer intrusive/forceful/rough handling behaviours), recognising poor welfare and cruelty, and knowing how to behave safely around animals	7	6	2	57.7
4 Improved empathy and 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 and an appreciation of their own impact on animals – increased self-awareness and self-reflection, and feeling more empowered to take action	3	3	2	30.8
7 Being more respectful of, and improved attitudes towards, animals	1	4	2	26.9
8 Sustained behavioural change and reduced incidence of children harming animals or being harmed by animals	4	3	6	50.0

1 = most important change you would like to see; 2 = second most important; 3 = third most important change.

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, and a one-off or <i>ad hoc</i> 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 and there is little research evidence. It is hard to assess the impact long term (and difficult to attribute to an individual intervention)	2	77.0	34.6
4 In general I do not see much success. Interventions are lacking and I think cruelty may be increasing not decreasing. I do not think current interventions are dealing with negative influences with respect to animal welfare (culture, social media and gaming)	3.5	50.0*	3.8
5 I am not sure. They are definitely not successful enough	3.5	50.0*	7.7

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

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

In terms of perceived gaps in current provision (Q18), there was strong consensus with respect to the notion that AWE should be embedded within the school curriculum

(96%; median = 1), and that teenagers/secondary school age students (85%; median = 2), as well as at risk/vulnerable children/young people (85%; median = 1.5), are neglected groups. There was no consensus on whether animal welfare/cruelty prevention not being currently recognised as important in society reflects a gap in provision (69%; median = 2), or the lack of skills-based education (54%; median = 2). Fifty-eight percent felt they were aware what the gaps were in current provision, leaving 42% unsure. Seventy-three percent (close to our cut-off point) chose AWE being part of the curriculum as

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 (1-7)	% 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 and learn how to be compassionate	2	65.4
3	Everyone benefits from understanding more about animals and their needs	1	100.0
4	People who are already positive about animals and 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*

* Reverse scored, as more people disagreed/strongly disagreed than agreed with this statement.

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 and track change. We can observe changes in children's behaviour and 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

the gap that should be prioritised. Participants often commented on this question and it was evident how strongly many felt about the importance of embedding this area within formal school education.

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

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

There was consensus on half of the statements relating to the ease/difficulty of measuring desired changes in children (Q20; Table 12). There was strong agreement that knowing how to measure impact is a significant challenge for most animal welfare organisations, and that it is possible to measure immediate impact, but far more challenging to assess whether changes are sustained in the longer term. Eighty-one percent of participants also agreed that if working closely with individuals over time, it is easier to see and track change. Some practitioners work on a one-to-one basis or with small groups over a period of time and they described how changes in individuals can be observed, but not necessarily captured using standardised measures (see Muldoon &

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- and 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) and 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 and 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 and 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	53.9*

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

Williams 2021: this issue). There was no consensus on the difficulty of measuring changes they would like to see, the straightforwardness of measuring knowledge, attitudes, or beliefs using pre- and post-tests, or successful measurement being dependent on working with academic partners.

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

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

Between 81 and 100% of participants agreed that all four types of support would be useful when evaluating their own interventions (Q23; Table 14).

(vi) Terminology and definitions

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

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

Discussion

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

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 and how to measure, statistical analysis, recognising limitations, and communicating findings effectively	1.5	80.8
3 Examples of good practice and 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	69.2*

* Reverse scored, as more people disagreed than agreed with this statement.

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' and 'cruelty prevention' - what the use of those terms means to you. Please read through the definitions below and 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	65.4*
2 Animal welfare education is concerned with unintentional cruelty and 'universal approaches', cruelty prevention is concerned with intentional cruelty (actual or expected given the risk factors) and 'targeted approaches'	3	46.2
3 Animal welfare education is predominantly concerned with challenging myths and 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 and 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	80.8*
7 I do not 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

* Reverse scored, so consensus calculated for those who disagreed/strongly disagreed with statement.

Lack of consensus on priorities — trying to tackle too much?

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

With respect to identifying key target groups for interventions, all groups were considered important, so there was strong recognition of the need for both universal and targeted interventions. It is interesting to note that not all groups identified are covered by current provision. Parents, and children who have harmed animals, for example, are rarely included by charities offering interventions. There was a lack of consensus on target priorities (other than school-age and at-risk groups). Participants also agreed on all the components of successful interventions, with the exception of involving animals. This is important and likely due to recent concerns about the welfare of animals used within educational or therapeutic interventions (Animal-Assisted Intervention and Therapy). It also suggests the need for alternatives to be developed (eg robotic or toy animals, virtual reality techniques, and high-quality video

footage) as teaching aids. Again, there was no consensus on the components to prioritise. This may point to difficulties in identifying which individual components matter most.

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

Evidence of tensions around terminology

There was no consensus on whether ‘cruelty’ is different from ‘neglect’ or if cruelty is difficult to define, suggesting widely differing perceptions and degrees of comfort with the language used in the field. The inclusion of our additional question in Round 2 provides stronger evidence in this regard. Half the sample agreed they were not comfortable with the term ‘cruelty prevention.’ There were many allusions in Round 1 to cruelty not being a useful term to use in many situations (Muldoon & Williams 2021; this issue) and that there are such varied views on what that constitutes, that everyone has a different view of what AWE and cruelty prevention are for. One participant compared this with the language that has been used around domestic violence, and perhaps goes some way towards explaining why there is sometimes a reluctance to engage with the topic of ‘childhood cruelty to animals.’ This has significant implications for the common goal of incorporating animal welfare education into the school curriculum where agreed terminology would be advantageous. We have begun to use the word ‘harm’ to replace ‘cruelty’, but some practitioners suggest that only positive-oriented language should be used, denoting positive welfare; what helps animals to be happy and healthy, what do not they like, and what makes them feel uncomfortable or worried?

‘Animal welfare education’ appears to engender the idea of correcting, or compensating for, a lack of knowledge. Accordingly, it may be necessary to expand these terms (AWE and cruelty prevention), or abandon them altogether in favour of ‘Caring for Life’ interventions (discussed in our partner paper) that could more easily encompass positive and negative behaviours, and not just be limited to catering for animals’ basic needs. This would fit with the UNESCO four pillars of education: learning to know; learning to do; learning to live together; and learning to be. This resonates well with humane education approaches, and also reflects the observation, that:

society in most First World countries is changing its views and understanding of animals, as well as its expectations for their care [Beaver 2005; p 419].

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

The need to be an animal welfare expert

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

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

Rejection of a ‘one-size-fits-all’ approach

Linked to the previous theme, there was little consensus with respect to the need for structure and standardisation. Within both the UK education system and evaluation research methodology, structure is considered fundamental.

Yet, there appear to be significant concerns about having a strong structure and a ‘one-size-fits-all’ approach. Instead, animal welfare professionals feel that interventions need to be tailored to particular groups or individuals and be flexible to change. Whilst intuitively this seems very important, it does pose significant challenges with respect to high quality monitoring and evaluation. Indeed, this issue is recognised by many of the AWE experts. When asked to what extent they felt current interventions were successful, the only statement participants agreed on was that it is difficult to assess because many interventions are not evaluated effectively, there is little research evidence, and long-term impact is difficult to measure.

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

Improving behavioural outcomes and measuring impact — setting realistic and achievable goals

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

At the moment, it is not clear if those working in this area are confident that their programmes are making a difference. This is regrettable given the amount of hard work being carried out. There was a high degree of uncertainty not just around how to assess the overall success of interventions, but also who current interventions work best for and what the gaps in provision are. Practitioners can see the effects they have at an individual level and can recount success ‘stories’ (see Muldoon & Williams 2021; this issue). This is encouraging and the illustration of a programme’s impact through a participant’s story can be extremely powerful. However, there is a need to identify the broader impact, for whom a programme does (or does not) work and

what it is about the programme that leads to positive outcomes — which elements are important and can feed into other interventions to maximise impact.

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

Limitations of the study

One limitation is that this study combined consideration of ‘animal welfare education’ and ‘cruelty prevention.’ These are both common terms in the field and our study has shown that many participants treat these as part of the same endeavour and use these terms interchangeably. ‘Cruelty’ is embedded in the charities’ work and sometimes in their name (eg SPCAs: Societies for the Prevention of Cruelty to Animals). However, there are equally as many that view these areas very differently. To carry out the study in a way that asked these crucial questions about AWE and cruelty prevention separately would have been unfeasible. Moreover, asking participants to consider interventions in the broadest sense has produced an unanticipated finding that is foundational to the field — the assumptions that underlie the development of interventions are wide and varied. There are clearly different ways of interpreting ‘animal welfare education’ and ‘cruelty’/‘cruelty prevention.’ Without a shared language where meanings are agreed upon, understood and communicated within and beyond the field, it will be difficult for practitioners to learn from each other and ensure interventions are designed in such a way that they are targeting the right people and producing the intended outcomes. Further evaluation research is also required, as well as studies that assess the type and effectiveness of programme content and pedagogy currently being employed within AWE/cruelty prevention interventions.

This study also broadly reflects a mainly UK perspective. Only four participants were working predominantly in the US or Canada although three, while UK-based, had worked in Asia and Africa. We cannot draw any strong conclusions either with regard to views on how AWE might need to take account of different ethnic and cultural groups or urban/rural locality. However, our partner paper (Muldoon & Williams 2021; this issue) highlights the views of those in our sample who were working internationally, considering the contribution their thinking might make to embedding education in UK school curricula.

Animal welfare implications and conclusion

The aim of this study was to understand and document expert views on animal welfare education/cruelty prevention interventions, establishing where there is consensus on the best ways of working in this field, and where there is discord or tension. This was undertaken in order to facilitate the development of an overall framework for guiding policy, practice, and future research agendas in the field of animal welfare education and childhood cruelty to animals. Importantly, it has been used to develop a toolkit (see Muldoon & Williams 2021; this issue), providing advice and step-by-step guidance on how to develop an intervention and evaluation, including examples of established evaluation techniques and measures.

We also anticipate opening up discussion within the AWE community with regard to the tensions and discord we have identified. These undoubtedly need to be understood and addressed if the goal to integrate animal welfare into school curricula is to be achieved. Learning from each other is critical to ensuring the long-term success of interventions, just as research benefits significantly from interdisciplinary collaborations across different fields and between academics and practitioners. In the area of animal welfare, these collaborations are in their infancy, though there are some examples of established and productive partnerships. This study suggests that the most fruitful collaboration is likely to be between animal welfare organisations and schoolteachers, each helping to upskill the other and establish a common language and approach. It is essential that all those working to enhance the lives of animals and children capitalise on opportunities to collaborate, so that:

...in the future, integrated research projects [and interventions] including child psychology, veterinary, medical, educational and other social sciences can be developed as a result of these efforts and produce research [and intervention programmes] with impact [Meints *et al* 2018; p 11].

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