

# Animal welfare & animal-assisted interventions with children, young people & clinical populations

*A reflective workshop*

Friday 5<sup>th</sup> October  
University of Stirling  
2 - 4.30pm



THE UNIVERSITY  
of EDINBURGH

**SCOTTISH SPCA**  
Scotland's Animal Welfare Charity



# Animal welfare & animal-assisted interventions with children, young people & clinical populations



## Part 1: Introducing caar & a new animal welfare intervention

Jo Williams

- **Reflection Point 1**

## Part 2: Understanding cruelty in order to intervene effectively

Roxanne Hawkins

- **Reflection Point 2**

*Short break - 3.30-3.45pm*

## Part 3: Animal-assisted intervention (AAT)

Emma Hawkins

- **Reflection Point 3**

# Children, adolescents and animals research



- 'caar' is a small research team based in the Centre for Applied Developmental Psychology (CADP), University of Edinburgh
- We conduct a range of projects on all aspects of children's interactions with animals
- We work in collaboration with the Scottish SPCA and other charities
- A range of funders including UK Government, charities and funding councils
- Delivered 4 workshops this year & talks at the joint Scottish SPCA conference in September (ESRC impact grant)



# Members of caar



Prof Jo Williams



Dr Janine Muldoon



Lianne White



Dr Roxanne Hawkins



Dr Monja Knoll



Laura Wauthier



Emma Hawkins



Gilly Mendes Ferreira



Amber Arnold



## Welfare/5 freedoms

- Hunger & thirst
- Discomfort
- Fear & distress
- Pain, disease & injury
- Exhibit natural behaviour

## Education

- Pedagogical approaches
- Curriculum
- NGO activities and materials

## Child development

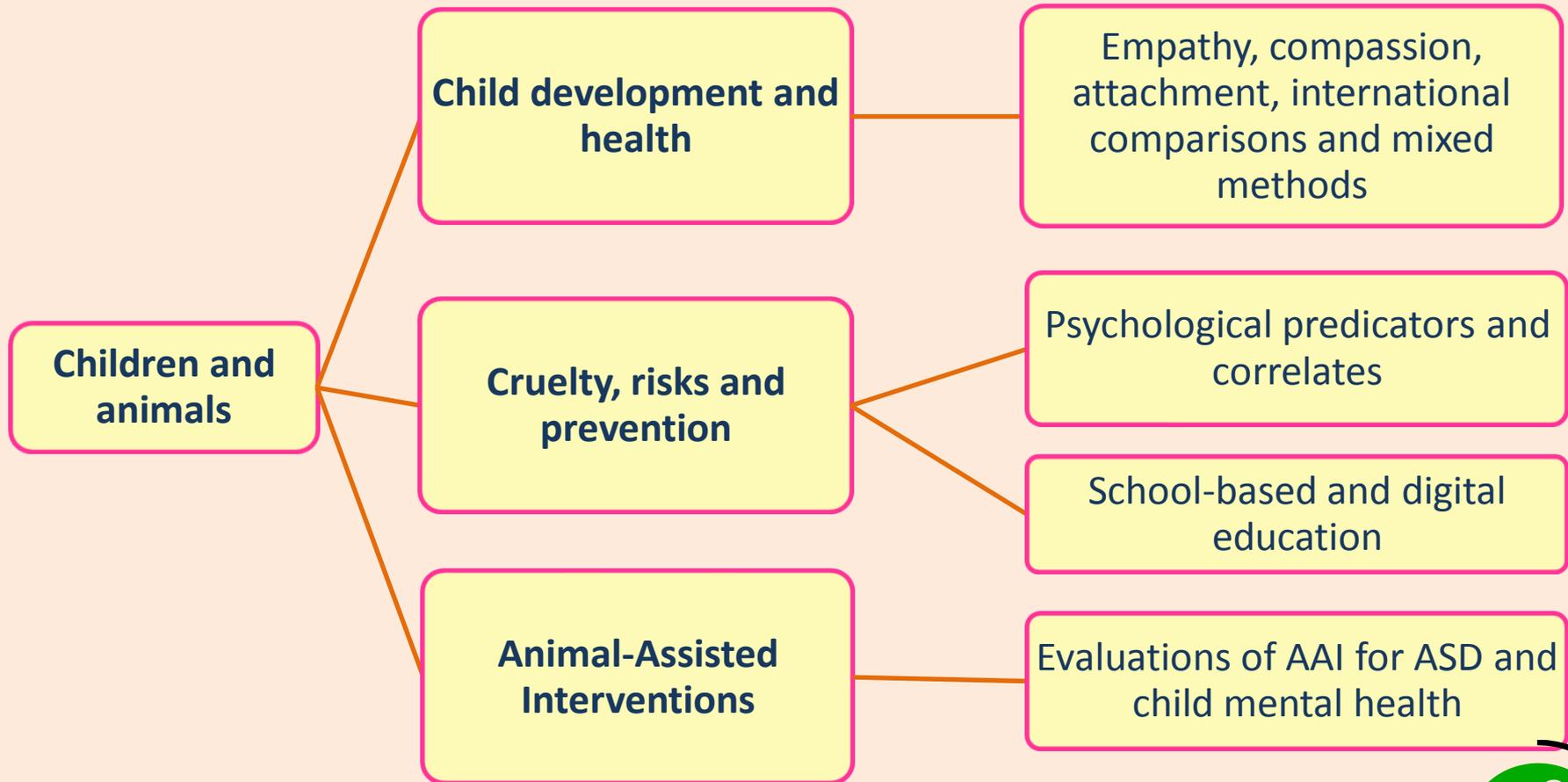
- Concepts & understanding
- Attitudes
- Emotional attachments
- Empathy

## Child/adolescent health

- Physical health
- Activity & exercise
- Mental health
- Animal-assisted interventions



# Recent caar research



# Animal welfare education: Digital approaches



- **Farm Animal Welfare Game** (Developed in Unity by Informatics MSc student, Distinction)
  - Evaluated and currently refined for Scottish SPCA education programme reaching 270,000 children; paper accepted for international conference ISAZ, to be published in 'Animals'.
- **Pet Welfare Game** (Developed in Articulate Storyline 2 by Clinical Psychology PhD student)
  - Evaluated and currently refined for Scottish SPCA education programme reaching 270,000 children; paper submitted for publication in 'Vet Record'.
- **Wild Animal Welfare Game** (Developed in Articulate Storyline 2 by Clinical Psychology MSc students, Distinction and Merits)
  - Evaluated and currently refined for Scottish SPCA education programme reaching 270,000 children; paper accepted for international conference ISAZ; in preparation for publication
- **Animal Welfare Needs Learning Object** (Developed in Articulate Storyline 1 by post-doc researcher on Defra funded project)
  - Evaluated and available online for secondary school science teachers to use
- **Web-based Animal Welfare Quiz Tool** (Developed in Android 6.0 Marshmallow by Informatics MSc Student, Distinction)



# Rabbit Rescuers: Background



- A new intervention developed jointly with the Scottish SPCA
- Intervention for 5 to 7 year-olds to be incorporated into Scottish SPCA 'Prevention through Education' Programme
- Rabbits have multiple roles in UK society - common pet but also a food animal, lab animal, and wild animal
- Limited legal protection compared with other companion animals
- Current concern for rabbit welfare:
  - kept on their own;
  - accommodation too small for physical needs;
  - diet is not optimal;
  - lack veterinary care;
  - owners have low welfare knowledge about rabbits



# Rabbit Rescuers: Study Design



- Sample: 123 children ages 5-7 years (65 boys; 58 girls)
- Pre-test, intervention, post-test, design
- Individual interviews with measures of:
  - sentience
  - welfare knowledge
  - attachment
  - attitudes to cruelty
- 3 intervention conditions:
  - intervention with mechanical rabbit
  - intervention with fluffy rabbit
  - no intervention control



# Rabbit Rescuers: Intervention



- **Activities designed to teach children about:**
  - Rabbit sentience - emotion recognition
  - Rabbit welfare needs - 5 welfare needs/freedoms
  - Rabbit care - large hutch and run, vet care, etc.
- **Structured over 5 days with different activities each day:**
  - Build upon and consolidate knowledge
  - Allow time for internal reflection on learning
  - Give focus to the intervention
- **Delivered by teachers following an intervention handbook:**
  - Information about learning outcomes
  - Information about rabbit welfare
  - Step-by-step guide to the activities
  - Aim to standardise delivery and gain teacher feedback



# Rabbit Rescuers: Results



## Analysis used 3 way Anova to test effects of:

- time (pre- to post-test)
- intervention condition (mechanical, fluffy and control)
- age (5 and 6 year-olds)

## Summary of key significant findings

### Pre- to post-test change:

- Improvements in welfare knowledge
- Improvements in understanding of sentience
- Improvements in attitudes towards cruelty
- Improvements in attachment to pets

### Intervention condition effects:

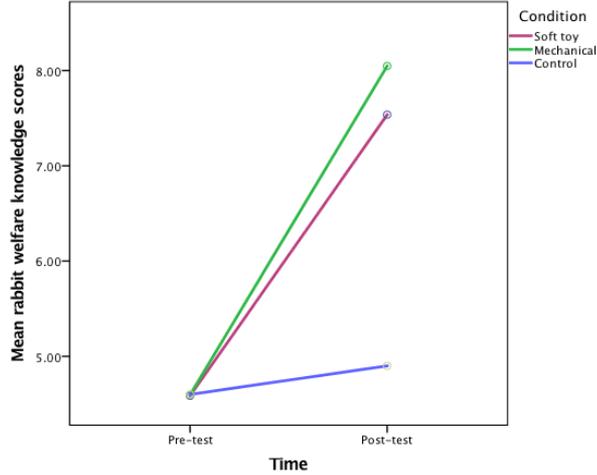
- Mechanical toy condition improved most in all outcomes apart from attachment
- Fluffy toy condition led to greater pet attachment improvements
- Control group showed no change



# Rabbit Rescuers: Results

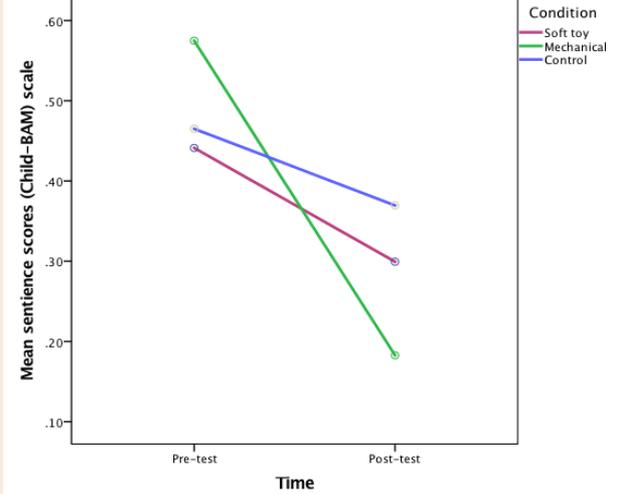


### Rabbit Welfare Knowledge at Pre-test intervention and Post-test Intervention

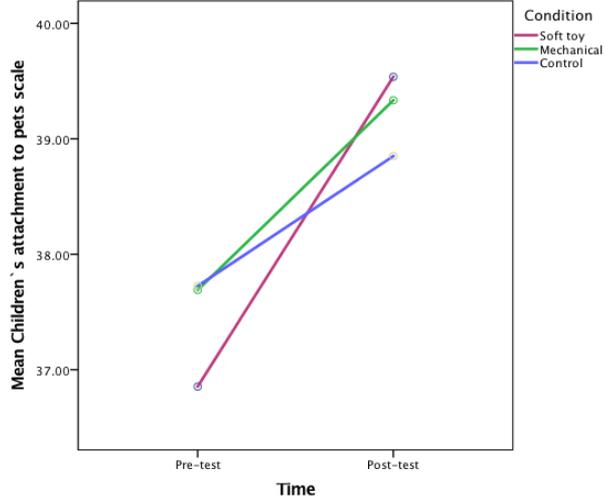


Sentience scores transformed and inverted

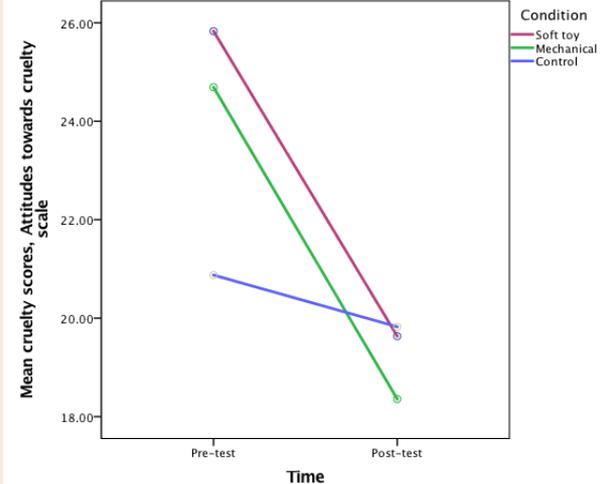
### SENTIENCE scores (Child-BAM) at pre-test and post-test



### Attachment scores at Pre-test intervention and Post-test intervention



### Cruelty scores at Pre-test intervention and Post-test intervention



# Research into practice model



# Summary of animal welfare education



- Traditional and digital interventions lead to knowledge gains and improved understanding of sentience and attitudes to cruelty, but often have limited impact on empathy and attachment
- We need to reach empathy and attachment in interventions because they underpin positive human-animal interactions and are implicated in positive welfare and wellbeing outcomes
- Use of mechanical and soft toys within interventions has an impact on knowledge and sentience understanding and on attachment
- Future research should investigate optimal live animal substitutes for:
  - School-based animal welfare education interventions
  - Animal-assisted interventions for children who might harm animals



# Sharing & reflecting (1)



## How do we keep animal welfare education up-to-date and effective?

- How can we embrace new technologies?
- How do we get schools to adopt animal welfare education?
- Can we get it into the Curriculum for Excellence?
  - Share your thoughts with your group
  - Remember to allow sufficient time for others
  - Please take turns to make notes on the recording form

# Understanding and preventing animal cruelty



**‘Prevention through Education’ (2014-2018)**

**Psychological risk factors for animal cruelty (2015-2017)**

**Children’s attitudes towards animal cruelty (2015-2018)**

**Personality, empathy, animal cruelty and callous-unemotional traits (2016-2018)**

**Animal Guardians (2018)**

**Violence and Animal Cruelty of Portuguese juvenile offenders (2018)**

**Childhood animal cruelty and family violence (current)**

# What do we know about animal cruelty?



**Developmental issues**

**Lack of knowledge of welfare needs**

**Lack of knowledge of animal sentience**

**Misinterpret animal emotional signals**

**Don't know how to behave appropriately**

**Barriers to responsibility for animal care**

# What do we know about animal cruelty?



**Behavioural disorders and aggression**

**Early life experiences / adversity**

**Violence towards others**

**Psychopathy, sadism**

**Deficits in empathy**

**Callous-unemotional traits**

**Socio-cognitive factors**

**- attribution bias, schemas, emotion regulation,  
impulse control**

**Brain activity differences**



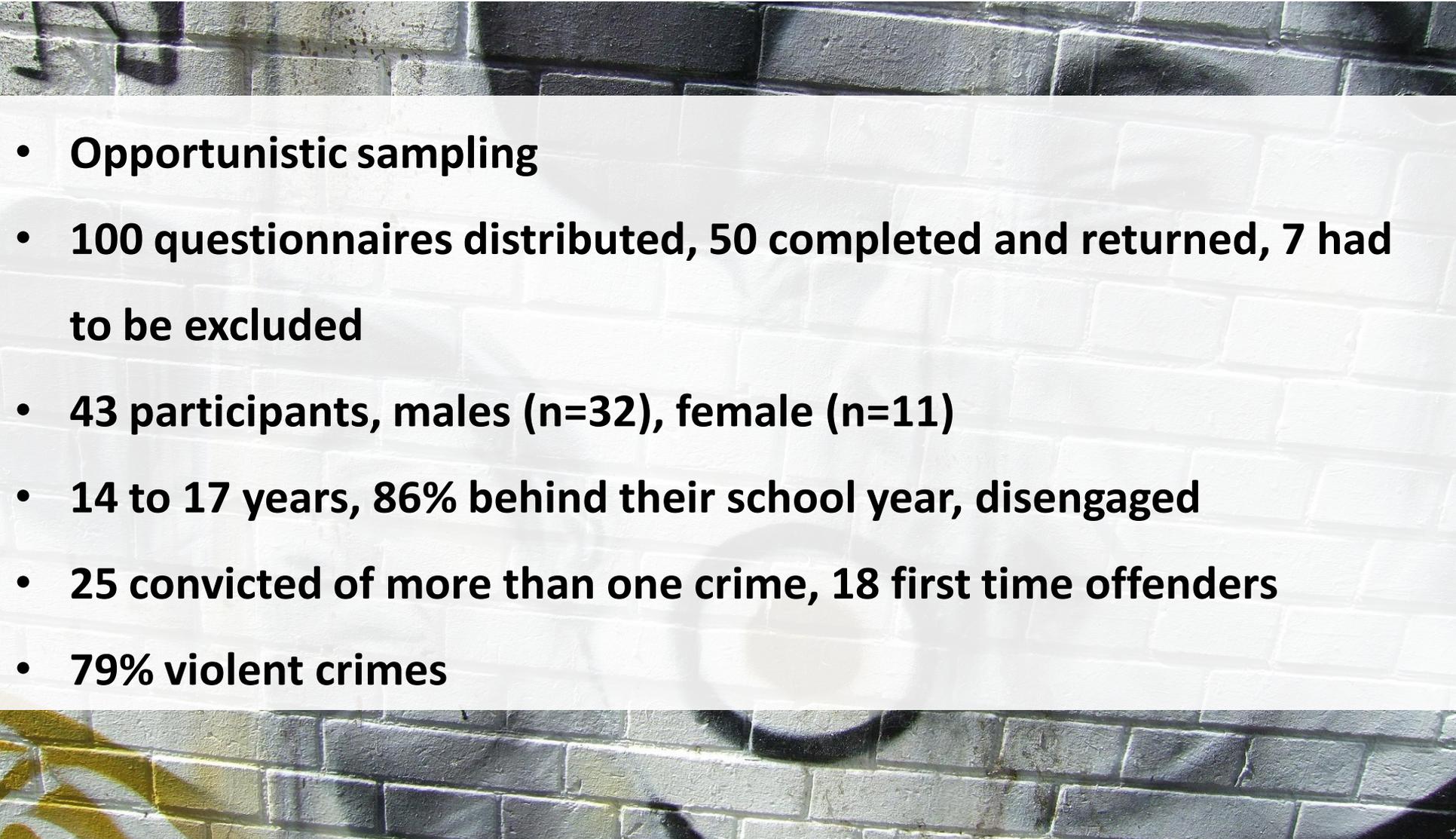
# Violence and animal cruelty of Portuguese juvenile offenders



Ines Ribeiro Galrica (MSc Childhood Studies)

- Explore whether adolescents who have committed violent crimes and animal cruelty differ in their social and emotional skills
- Explore whether animal violence is related to violent crimes towards other humans
- Explore adolescents conceptualization of morality

# Violence and animal cruelty of Portuguese juvenile offenders



- **Opportunistic sampling**
- **100 questionnaires distributed, 50 completed and returned, 7 had to be excluded**
- **43 participants, males (n=32), female (n=11)**
- **14 to 17 years, 86% behind their school year, disengaged**
- **25 convicted of more than one crime, 18 first time offenders**
- **79% violent crimes**

# Violence and animal cruelty of Portuguese juvenile offenders



- Demographics inc. nature of the crime, pet ownership
- **Animal cruelty:** crimes against animals, type of cruelty
- **Social skills:** Social Skills Questionnaire (Gresham & Elliott, 1990)
  - sub-scales: cooperation, assertiveness, responsibility, empathy and self-control
- **Empathy:** Scale of Interpersonal Reactive Index (Limpo, Alves & Castro, 2010)
  - Subscales: Perspective taking, Fantasy, Empathic concern and Personal Distress
- **Prosocial behaviour:** Helping Attitudes scales (Nickel's, 1998)
- **Morality:** What it Morality or Moral Values?

# Violence and animal cruelty of Portuguese juvenile offenders



- **Approved by Portuguese minister of education and institutions**
- **Meeting with a member of the counselling team**
- **Participant Selection (volunteer)**
- **Staff read out information sheet and consent form**
- **Distribute envelopes to participants, information, consent, survey**
- **Complete questionnaire alone but in small group setting**
- **Surveys placed in sealed envelopes and collected**

# Results: cruelty vs non-cruelty



## Social skills

↓ Empathy *ns*

↑ Cooperation *ns*

↓ Assertion *ns*

↓ **Self-control** .013

↓ Helping attitudes *ns*

## Emotional skills (empathy)

↓ **Empathetic concern** .001

↓ **Perspective taking** .007

↓ Fantasy *ns*

↑ Personal distress *ns*

*48.8% committed violent crimes*

# Morality

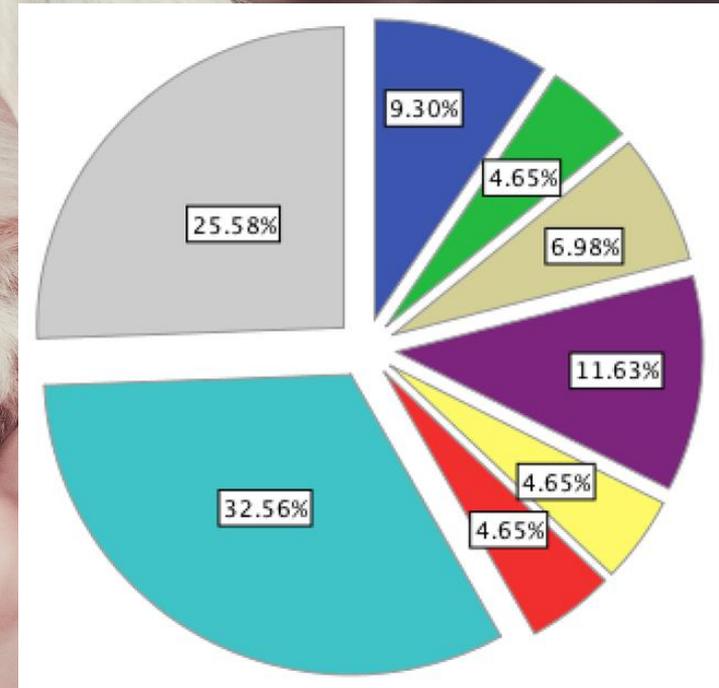


*“Morality for me is when a young person is in a fight and other people get around to support, shouting and telling to keep going, making me want to fight more.”*

*“Having “Moral” is knowing what you are talking about, having the experience and strength to say what you want and go after what you want.”*

Themes in Morality Question

- Helping others
- Good vs Evil
- Respect others
- Value
- Follow Rules
- Social Support
- Assertion, Self-esteem
- Dont Know, No Answer



# Conclusion



- **Those who are cruel to animals score lower on social and emotional skills such as empathetic concern, perspective taking and self-control**
- **Interventions should focus on improving these skills**
- **Those cruel to animals more likely to have committed violent crimes (same as adults)**
- **Importance of prevention**
- **Prison-based animal interventions**

# Preventing animal cruelty in Scotland



- Research into risk factors for animal cruelty to help develop new interventions
- Pilot work into animal cruelty prevention interventions
- Scottish SPCA 'Prevention through Education'
- Scottish SPCA 'Animal Guardians'
- Paws for Progress
- Animals in prisons e.g. Shotts

*"This wee cat saved my sanity. The wee cat was the first thing I showed affection to in seven years."*

# Sharing & reflecting (2)



**Given the psychological risk factors for animal cruelty, when do we intervene?**

- Is adolescence too late?
- How do we intervene?
- What are the links with other forms of violence?
  - Share your thoughts with your group
  - Remember to allow sufficient time for others
  - Please take turns to make notes on the recording form



**Tea/coffee break - 15 minutes**

# Animal-assisted intervention (AAI)



- Animal-assisted interventions - definitions:
  - Animal-assisted therapy (AAT)
  - Animal-assisted activity (AAA)
  - Animal-assisted education (AAE)
  - Resident animal

# Introduction



- Animal-assisted therapy has shown promise for:
  - Heart failure (Cole et al., 2007)
  - Stroke (Beinotti et al., 2013)
  - Depression (Antonioli & Reveley, 2005)
  - Dementia (Olsen et al., 2016)



Cole KM, Gawlinski A, Steers N, Kotlerman J. Animal-assisted therapy in patients hospitalized with heart failure. *American Journal of Critical Care*. 2007;**16**(6): 575–85.

Beinotti F, Christofolletti G, Correia N, Borges G. Effects of horseback riding therapy on quality of life in patients post stroke. *Topics in Stroke Rehabilitation*. 2013;**20**(3): 226–32.

Antonioli C, Reveley MA. Randomised controlled trial of animal facilitated therapy with dolphins in the treatment of depression. *BMJ*. 2005;**331**(7527): 1231.

Olsen C, Pedersen I, Bergland A, Enders-Slegers MJ, Patil G, Ihlebæk C. Effect of animal-assisted interventions on depression, agitation and quality of life in nursing home residents suffering from cognitive impairment or dementia: a cluster randomized controlled trial. *International Journal of Geriatric Psychiatry*. 2016;**31**(12): 1312-21.

# Schizophrenia



- Schizophrenia:
  - Severe but treatable
  - Affects 21 million people worldwide
  - High burden of disease
- Positive symptoms:
  - Hallucinations
  - Delusions
  - Thought disorder



- Negative symptoms:
  - Blunted affect
  - Emotional withdrawal
  - Social withdrawal

Intervening slides on the study  
discussed removed at author's request

# Conclusion



- Promise for treatment of negative symptoms and negative self-view
- Premature to make changes to policy and practice
- Need for rigorous, large-scale, longitudinal randomised controlled trials



# Sharing & reflecting (3)



## For whom might animal-assisted intervention work?

- What might the risk be for human participants?
- What might the risk be for animal participants?
- How do we produce good quality evidence?
  - Share your thoughts with your group
  - Remember to allow sufficient time for others
  - Please take turns to make notes on the recording form

# Thank you for coming!



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