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Joanne M. Williams, Janine Muldoon and Alistair Lawrence

Children and their pets: Exploring the relationships between pet ownership, pet attitudes, attachment to pets and empathy

Animals play important roles in children's lives. Many children in the UK, and internationally, grow-up in households with companion animals. The most common family pets in the UK are dogs, cats, rabbits, guinea pigs, caged birds and fish. Kidd and Kidd (1985) found that 99.3% of 3 to 13 year-olds reported that they wanted a pet and 57% had a preference for dogs over other species. Children often consider pets to be members of their family (Morrow, 1998).

Pet ownership confers a range of potential benefits for children's development (Melson, 2001). In a large review (Muldoon, Williams, Lawrence, Lakestani & Currie, 2009), research on children and animals was synthesised into three over-arching themes. The first theme concerns children's understanding of animals. Rooted in theories of cognitive development this work reveals developmental changes in children's naive understanding of biology (e.g. Siegal, 2008; Siegal & Peterson, 1999) and the importance of direct experience, including pet care, for learning about biology (e.g., Inagaki & Hatano, 2002; Williams & Smith, 2006).

Research on children's attitudes towards animals forms a second major theme. This research explores individual differences in attitudes towards pets, the factors that lead to positive attitudes and also the relationship between attitudes and behaviour towards animals (a key concern for animal welfare). Much of this literature

has focused on adults including retrospective accounts of their childhood experience of companion animals (e.g., Serpell, 2004). Studies report marked gender differences in attitudes towards animals with women tending to be more favourable in their attitudes than men (e.g., Kellert & Berry, 1987; Bjerke, Odegardstuen & Kaltenborn, 1998). This research has also revealed predictable changes in attitudes with age during childhood (e.g. Pagani, Robustelli & Ascione, 2007). Moreover, children who grow up in households with pets have been found to have more favourable attitudes to animals as adults (e.g. Serpell, 2004). This in turn could enhance positive interactions with animals.

A third theme to emerge from the Muldoon et al. (2009) review is research that focuses on the emotional attachments children form to key animals in their lives and the consequences of these for socioemotional development. Davis and Juhaz (1995) suggest that children perceive the family pet as providing them with empathic and complementary friendship. Melson, Peet and Sparks (1991) found attachment to pets to be strongest among 9 to 10 year-olds. Furthermore, females express significantly more attachment to pets than males (e.g. Holcomb, Williams & Richards, 1985). This pattern of gender differences mirrors that found in attitudes towards animals. The issue of the attachment to animals has implications for the development of empathy among

children and for their caring behaviour towards animals.

The present study has four main objectives. Firstly, it will examine age differences in attitudes towards and attachment to animals and empathy. Secondly, it will explore gender differences in these measures. Thirdly, the impact of pet ownership on attitudes towards and attachment to animals and empathy will be considered. Finally, the associations between attitudes towards pets, attachments to pets, and empathy will be examined.

Methods

Sample

Children from two primary schools and a linked secondary school in a rural area of the UK participated in this research. The sample comprised: 57 9 year-olds (mean=10.1 years, 29 girls and 29 boys); 38 11 year-olds (mean=12.2 years, 21 girls and 17 boys); and 26 13 year-olds (mean=13.11 years, 12 girls and 14 boys).

Questionnaire and Procedure

The questionnaire was composed of a series of five questions on pet ownership followed by standardised measures:

1. Pet Attitude Scale (Templer et al., 1981; Munsell et al., 2004; Daly & Morton, 2006). This 8-item version measures attitudes towards pets (Cronbach's alpha = 0.76).
2. Attachment to Pets Scale (e.g. Staats et al., 1996; Kafer et al., 1992) comprises 12 items to gauge people's relationships with their pet animals (Cronbach's alpha = 0.80).
3. The Lexington Attachment to Pets Scale (Johnson, Garrity & Stallones, 1992) an 11-item sub-scale for 'general attachment' (Cronbach's alpha = 0.90).
4. Affective Empathy (Enz et al., 2008) 10-item scale assesses general affective empathy (not specifically towards animals) among school-aged children (Cronbach's alpha = 0.86).

Children were asked to complete the questionnaire in the classroom during class time. A researcher was present to answer any questions relating to the procedure and to clarify the meaning of any of the items the children were unsure of. The questionnaire took approximately 15 minutes for children to complete.

Results

Pet Ownership: 79% children had a pet in their home. However, of these children 35% did not consider the pet(s) to belong to them personally. By contrast, 22% of children who did not have a pet in their own home reported that they did feel they had a pet of their own (e.g. at grandparents' home, separated parents' home or neighbourhood pet).

Age Differences: A series of ANOVAs were conducted to test for age differences in each variable. No age differences were found in children's attitudes to animals (9 years mean=4.38; 11 years mean=4.25; 13 year mean=4.28), Pet Attachment Scale (9 years mean=4.14; 11 years mean=4.07; 13 year mean=4.03), Lexington Attachment Scale (9 years mean=4.34; 11 years mean=4.16; 13 year mean=4.09), or Affective Empathy Scale (9 years mean=3.94; 11 years mean=3.65; 13 year mean=3.66).

Gender Differences: t-tests revealed no gender differences in children's attitudes to animals (girl mean=4.39; boy mean=4.24), Pet Attachment Scale (girl mean=4.18; boy mean=4.01), or Lexington Pet Attachment Scale (girl mean=4.33; boy mean=4.13). However, girls scored statistically higher on affective empathy (girl mean=4.03; boy mean=3.53, $t(118)=3.85, p<.01$).

Impact of Pets: t-tests showed no differences between children who had a pet in their home and those who did not on the four measures. However, children who felt they had a pet of their own tended to have more positive attitudes towards pets (have pet mean=4.43; do not have pet mean=4.24, $t(115)=1.92, p=0.058$).

Relations between variables: There were strongly significant correlations between attitudes towards pets and attachment to pets. There were also weaker but significant correlations between these measures and affective empathy. Attitudes to pets was positively correlated with the Pet Attachment Scale ($r=0.75$, $p<.01$), Lexington Attachment Scale ($r=0.76$, $p<.01$) and affective empathy ($r=0.29$, $p<.01$). The Pet Attachment Scale was also correlated with the Lexington Attachment Scale ($r=0.86$, $p<.01$) and affective empathy ($r=0.3$, $p<.01$). Finally, The Lexington Attachment Scale was correlated with affective empathy ($r=0.3$, $p<.01$).

Discussion

The majority of children participating in this study reported living with at least one pet in their home. This supports the observation that pet ownership in the UK is the rule rather than the exception. This finding is simple yet potentially important. Very little research has focused on this pervading childhood experience; there is clearly an important gap in educational and psychological research on children's development.

Although there was a trend in the data of a decrease in positive attitudes towards pets with age, this failed to reach statistical significance. The small sample size contributed to this lack of effect. The potential decrease in positive attitudes with age was, however, supported by qualitative work also conducted by the authors (see Muldoon et al., 2009). This finding suggests that educational interventions to improve attitudes to animals might be most fruitful if they focus on preadolescents because at this age children are already receptive to positive messages about animal care and animal welfare. There was no gender difference in attitudes towards pets. This is interesting and unexpected because research with adults has often revealed robust gender differences in attitudes

towards animals. Future research is required to examine the age at which gender differences become apparent and the social and psychological processes that might contribute to this gender effect. An important finding was that children who feel they have a pet tend to hold more positive attitudes towards pets. The direction of effect remains, however, unclear. Children who hold positive attitudes are more likely to want to have a pet. Conversely the experience of pet ownership may lead to more positive attitudes to pets. The latter seems quite likely because simply having a pet in the home was not linked with more positive attitudes to pets in this study.

There were no developmental or gender differences in attachments to pets. The lack of gender effect here is again surprising and highlights the need for further research with a wider age-range to identify the age at which gender differences in attachments to pets emerge. All children in the study scored highly on attachment to pets indicating the important role pets play in children's social and emotional development. For many children having a pet is a source of emotional support and social interaction and helps them avoid loneliness (c.f. Melson, 2003; Davis & Juhasz, 1995).

The results also revealed that affective empathy is higher among girls in this sample and positively correlated with attitudes towards and attachments to pets. Pet ownership offers children the opportunity to engage in nurturing and caring behaviour towards another living creature (e.g. feeding, grooming, cleaning, giving and receiving affection). This is likely support the development of empathy during childhood not only towards animals but also in relation to other people (e.g. Melson, 2001).

This research has the limitation of a relatively small sample size. However, the results highlight the importance of animals in children's lives and the need for more

extensive research on child-animal interactions. It is part of a large-scale programme of work to create a scientific evidence base for the development and evaluation of interventions to promote a sense of 'duty of care' towards animals among children.

In conclusion, pet ownership is widespread but its effects on child development are under-researched. This study has revealed the highly positive attitudes girls and boys aged 9 to 13 years have towards pets and has revealed the strong attachments children form to their pets. This study has also highlighted the importance of direct experience of owning a pet for children's attitudes towards companion animals. Fostering children's positive relationships with animals is important because it can potentially lead to reciprocal benefits for both child development and animal welfare.

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