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The Impact of Pets on Human Health and Psychological Well-Being: Fact, Fiction, or Hypothesis?

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Abstract

Because of extensive media coverage, it is now widely believed that pets enhance their owners' health, sense of psychological well-being, and longevity. But while some researchers have reported that positive effects accrue from interacting with animals, others have found that the health and happiness of pet owners is no better, and in some cases worse, than that of non-pet owners. I discuss some reasons why studies of the effects of pets on people have produced conflicting results, and I argue that the existence of a generalized "pet effect" on human mental and physical health is at present not a fact but an unsubstantiated hypothesis.

Keywords

pets, companion animals, health, psychological well-being, happiness

Many people are deeply attached to companion animals. In the United States, over two thirds of households include a pet, most of which are regarded by their owners as family members. Considering that the lifetime costs of owning a pet are about \$8,000 for a medium-sized dog and \$10,000 for a cat (cats tend to live longer than dogs), devoting resources on a creature with whom you share no genes and who is unlikely to ever return the favor seems to make little evolutionary sense. Aside from the expense, there are other downsides to companion animals. In the United States, a person is 100 times more likely to be seriously injured or killed by a dog than by a venomous snake, and over 85,000 Americans are taken to emergency rooms each year because of falls caused by their pets. Further, people can contract a cornucopia of diseases from companion animals, including brucellosis, roundworm, skin mites, *E. coli*, salmonella, giardia, ringworms, and cat-scratch fever. And, pets are second only to late-night noise as a source of conflict between neighbors.

Although not culturally universal, pet keeping exists in most societies, and an array of theories have been offered to explain why people bring animals into their lives (Herzog, 2010). Among these are the misfiring of parental instincts, biophilia (a hypothetical biologically based love of nature), social contagion, the tendency for the middle class to emulate the customs of the rich, the need to dominate the natural world, social isolation in urban societies, and the desire to teach responsibility and kindness to children. While the reasons that

pet keeping has become a widespread cultural phenomenon are unclear, it is evident that companion animals are vitally important in the lives of many people.

The "Pet Effect"

When asked what they specifically get from their relationships with pets, people typically mention companionship, having a play partner, and the need to love and care for another creature. But fueled by media reports and books with titles like *The Healing Power of Pets: Harnessing the Amazing Ability of Pets to Make and Keep People Happy and Healthy* (Becker, 2002), the public has come to accept as fact the idea that pets can also serve as substitutes for physicians and clinical psychologists. The idea that living with an animal can improve human health, psychological well-being, and longevity has been called the "pet effect" (Allen, 2003).

Most pet owners believe that their companion animals are good for them. Personal convictions, however, do not constitute scientific evidence. Claims about the medical and psychological benefits of living with animals need to be subjected to the same standards of evidence as a new drug, medical device,

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or form of psychotherapy. Over the past 30 years, hundreds of studies have examined the impact of pets on human health and happiness. Here I argue that, contrary to media reports, an examination of this body of literature indicates that the pet effect remains an uncorroborated hypothesis rather than an established fact. (Note that the main focus of this article is on the effects of pets on the physical and mental health of their owners, not the efficacy of animals as therapeutic agents for disorders such as autism and attention-deficit/hyperactivity disorder.)

The Evidence That Pets Are Good for People

The first demonstration of an association between pets and health was an early study of 92 heart-attack victims in which 28% of pet owners survived for at least a year as compared to only 6% of non-pet owners (Friedmann, Katcher, Lynch, & Thomas, 1980). These findings generated a flurry of research on the positive impact of interacting with companion animals (see review by Wells, 2009a). For example, stroking dogs and cats, watching tropical fish in an aquarium, and even caressing a pet boa constrictor have been reported to reduce blood pressure and stress levels. The most convincing of these studies was a clinical trial in which hypertensive stockbrokers were randomly assigned to either pet or no-pet conditions. Six months later, when put in a stressful situation, subjects in the pet group showed lower increases in blood pressure than did those in the non-pet control condition (Allen, Shykoff, & Izzo, 2001). Researchers have also reported that psychological benefits accrue from living with animals. These include studies showing that pet owners have higher self-esteem, more positive moods, more ambition, greater life satisfaction, and lower levels of loneliness (El-Alayli, Lystad, Webb, Hollingsworth, & Ciolli, 2006).

Epidemiologists have also connected pet ownership to better health and well-being (see review by Headey & Grabka, 2011). For example, among 11,000 German and Australian adults, pet owners were in better physical condition than non-pet owners, and they made 15% fewer doctor visits, a potential savings of billions of dollars in national health expenditures. And an epidemiological study of Chinese women found that pet owners exercised more, slept better, felt more physically fit, and missed fewer days from work than women without pets. Further, these effects were particularly strong for individuals who reported that they were very closely attached to their pets.

Now the Bad News

Pet owners are, of course, delighted to read about research that confirms the view that living with a dog or cat makes for a happier and longer life. But while the media abounds with stories extolling the health benefits of pets, studies in which pet ownership has been found to have no impact or even negative

effects on human physical or mental health rarely make headlines. For instance, there was no media coverage of a recent study of 425 heart-attack victims that found pet owners were *more* likely than non-pet owners to die or suffer remissions within a year of suffering their heart attack (22% vs. 14%; Parker et al., 2010). Indeed, replication has been a persistent problem with research on the effects of pets on human health. Straatman, Hanson, Endenburg, and Mol (1997), for instance, found that performing a stressful task in the presence of a dog had no short-term effect on blood pressure. And a study of 1,179 older adults found no differences in the blood pressure or risk of hypertension of pet and non-pet owners (Wright, Kritz-Silverstein, Morton, Wingard, & Barrett-Connor, 2007). (The pet owners in the study did, however, exercise less than non-owners and were more apt to be overweight.)

The impact of pets on psychological well-being has also been called into question. A Pew Research Center survey of 3,000 Americans found no differences in the proportion of pet owners and nonowners who described themselves as “very happy” (in Herzog, 2010). Researchers in England administered the UCLA–Loneliness scale to people who were seeking a companion animal. When retested 6 months later, the individuals who had acquired pets were just as lonely as they were before they got their companion animal. In addition, they were no happier than participants who had not gotten a pet (Gilbey, McNicholas, & Collis, 2007). Another recent study found that older adults who were highly attached to their dogs tended to be more depressed than individuals who were not as attached to their companion animals (Miltiades & Shearer, 2011).

Nor has pet ownership fared well in recent epidemiological studies. A study of 40,000 Swedes found that while pet owners were physically healthier than non-pet owners, they suffered more from psychological problems including anxiety, chronic tiredness, insomnia, and depression (Müllersdorf, Granström, Sahlqvist, & Tillgren, 2010). A Finnish study of 21,000 adults reported that pet owners were at increased risk for hypertension, high cholesterol, gastric ulcers, migraine headaches, depression, and panic attacks (Koivusilta & Ojanlatva, 2006). In an Australian study of 2,551 elderly adults, dog ownership was associated with poorer physical health and with depression (Parslow, Jorm, Christensen, & Rodgers, 2005). Finally, in a longitudinal study of nearly 12,000 American adults, cat or dog ownership was unrelated to mortality rates (Gillum & Obisesan, 2010).

Reasons Why Pet-Effect Research Is Inconclusive

For many people, pets are profoundly pleasurable and a source of psychological support. The fact is, however, that empirical studies of the effects of pets on human health and well-being have produced a mishmash of conflicting results. While pets are undoubtedly good for some people, there is presently insufficient evidence to support the contention that, as a group, pet owners are healthier or happier or that they live longer than

people who do not have companion animals in their lives. Why are the results of studies on the pet effect so inconsistent? Ioannidis (2005) argues that conflicting results and failures to replicate are especially prevalent in areas of science in which studies are characterized by small and homogeneous samples, a wide diversity of research designs, and small effect sizes. He also believes that research topics that are particularly “hot” are especially prone to replication problems. All of these criteria apply to research on the effects of pets on human health.

Design problems are common in studies of human–animal interactions. Meta-analyses enable scientists to look for patterns in the results of multiple studies on the same topic, but there have been no meta-analyses of studies of the effects of pets on owner happiness or health. However, for a meta-analysis in a related area (the effectiveness of animal-assisted therapy), Nimer and Lundahl (2007) had to comb through 250 studies to find 49 that met even minimal standards for methodological rigor.

There is also the problem of how to interpret differences between pet owners and nonowners. Most studies reporting positive effects of pets are not true experiments in which the subjects are randomly assigned to “pet” and “non-pet” groups. Rather, they involve correlational or quasiexperimental designs that compare people who choose to live with pets with people who do not. Hence, while it might be the case that pets *cause* their owners to be healthier and happier, it is equally possible that the causal arrow points the other direction—that people who are healthier, happier, and wealthier to begin with are more likely to have the energy and financial resources required to bring companion animals into their lives and to keep them for extended periods. (Of course, the caution against conflating correlation and causality also applies to studies in which pet ownership has been found to be associated with poorer mental or physical health.)

In addition, many studies of human–animal interactions are based on self-reports of pet owners. While these can be useful, self-reports sometimes produce results that are at odds with more objective indices of health. For example, Wells (2009b) investigated the impact of acquiring a pet on individuals suffering from chronic fatigue syndrome. She found that while the pet owners in the study claimed their animals provided them with a host of psychological and physical benefits, their scores on standardized measures (the Chalder Fatigue Questionnaire, the General Health Questionnaire-12, and the Short-Form-37 Health Survey) indicated that they were just as tired, depressed, worried, and stressed as chronic fatigue sufferers who did not get a pet.

A problem called the “file drawer effect,” which plagues many areas of research, also skews the scientific literature on human–animal relationships. This is the tendency for negative results to wind up in the researcher’s filing cabinet rather than in the pages of a scientific journal. At a session at a 2009 conference on human–animal interactions, for example, one researcher reported that separation from their pets had no effect on the psychological adjustment of college students, another found that interacting with animals did not reduce depression in

psychiatric nursing home residents, and a third found no differences in the loneliness of adult pet owners and nonowners. So far, none of these studies have appeared in print.

Finally, erroneous positive results are more common in areas of science in which researchers have vested interests—financial or otherwise—in a study’s outcome. Researchers are often drawn to the study of human–animal relationships because they are pet lovers who are personally convinced of the healing powers of the human–animal bond. Hence investigators in this field need to be particularly vigilant in designing studies that reduce the chances of unconsciously biasing research results. This can be especially problematic in studies on the impact of pets on human health in which it is often difficult or impossible to eliminate placebo effects via traditional methods such as single- and double-blind experimental and control groups.

Why Psychologists Should Study Human–Animal Relationships

In short, despite the growing body of research on the bonds between people and pets, the existence of a pet effect on human health and happiness remains a hypothesis in need of confirmation rather than an established fact. This conclusion should not be taken as a condemnation of pet keeping. Indeed, companion animals have always been part of my own life, and I understand the joys that come with living with members of other species. Nor am I arguing that behavioral scientists should avoid studying the impact of animals on human health and well-being. In fact, we need more rather than less research on this topic.

Rozin (2006) cogently observed that in their quest to explain general principles of behavior, psychologists have neglected huge domains of human life such as food, work, and religion. I would add our attitudes, behaviors, and relationships with other species to the list of topics that most people find fascinating but that psychologists have for the most part ignored. The study of our interactions with animals is interesting, important, and challenging. Whether, and under what circumstances, pets make people happier and healthier is unclear. It is, however, clear that animals play a role in nearly every aspect of human psychological and cultural life. And our attitudes and behaviors toward and relationships with other species offer a unique window into many aspects of human nature.

Recommended Reading

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- Herzog, H. (2010). (See References). An accessible introduction to aspects of the psychology of human–animal interactions ranging from the effects of pets on human health and happiness to how people make moral decisions about the use of other species.

Knight, S., & Herzog, H. (Eds.). (2009). New perspectives on human–animal interactions: Theory, policy, and research [Special issue]. *Journal of Social Issues*, 65. Journal issue devoted to current research on aspects of human–animal relationships.

McCardle, P., McCune, S., Griffin, J.A., & Maholmes, V. (Eds.). (2011). *How animals affect us: Examining the influence of human–animal interaction on child development and human health*. Washington, DC: American Psychological Association. Edited volume focused on pets and child development but also including excellent reviews on the impact of animals on human health and well-being.

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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