Can Pet Crickets Improve the Well-being of the Elderly?

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New clinical trial finds surprising beneficial effects of caring for insects.

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When I told my friend Suze I was writing a blog post on an impressive new study on the impact of pets on the psychological well-being of old people, she started talking about her dad. Now 74, he went into a deep funk when his wife died three years ago. He lost interest in his friends, his favorite activities, and life in general. Suze was concerned. One day he called and told her he was thinking about getting a dog. He wanted to know if she thought this was good idea. She was encouraging and, after some research, Suze helped him pick out a miniature Schnauzer puppy. Almost immediately her dad’s demeanor improved. He and his new canine friend quickly bonded and, now her dad is energetic and socially and physically active. Suze says the light is back in his eyes, and she attributes this remarkable change to the little Schnauzer.

Then she asked me what kinds of animals were used in the study I was writing about. She seemed surprised when I said they were crickets.

The “Pet Effect”

The idea that companion animals make people happier and healthier is called “the pet effect.” Practically everyone has seen media reports extolling the beneficial impact of living with animals, particularly, dogs. The problem is that nearly all pet effect studies compare existing pet owners with non-pet owners. As a result, we cannot tell which direction the causal arrow points. While pets might improve our physical and mental health, it is equally plausible that people who are healthier and happier to begin with are more likely to have the energy and financial means to take care of a pet. Showing that pets actually cause better health and well-being requires a type of study called a “randomized control trial.” In these experiments subjects are randomly assigned to a treatment group or a control group. While randomized trials are the gold standard of clinical research, they are hard to pull off when they involve pets. But a team of Korean researchers led by Dr. Hae-Jin Ko recently took on this challenge. Their results were published in the journal Gerontology (here), and they were surprising, as were the pets – crickets.

The idea that taking care of insects might benefit the human psyche is not as far fetched as you might think. After all, researchers have found that older people who were given tropical fish aquariums showed improvements in mood and lower blood pressure. And, beetles and crickets have been popular pets in China and Japan for centuries. In Korea, the popularity of insect pets began to take off about 20 years ago, and by 2007 it had become a $40 million dollar industry.

Studying the Impact of Insect Pets

Dr. Ko’s group was interested in whether elderly Koreans would show improvements in their mental states if they were given pet crickets to care for. The participants in the study were 94 healthy adults whose
average age was 71. The 46 subjects in the insect group were each given a cage containing two female and three male oriental garden crickets. The bugs came with food, and an instruction manual. The new pet owners were given talks on cricket husbandry and on making healthy lifestyle choices. They were also telephoned once a week to see how things were going. Garden crickets were chosen because Koreans are familiar with crickets and their chirping songs, they are easy to take care of, and they are, well, cute. The 48 subjects in the control group also attended lectures on healthy lifestyle choices and, like the cricket group, they were telephoned weekly. At the beginning of the study, all the subjects completed a series of psychological tests that assessed their levels of depression, cognitive functioning, quality of life, sleeping difficulties, fatigue, and stress. They were also given several physiological measures of stress. At the end of eight weeks, all the subjects retook the psychological tests and biological assessments. They were also asked about how they felt about living with their insect companions.

Can Crickets Improve Human Mental Health?

After eight weeks of caring for their new pets, the individuals in the cricket group when compared to the control group:

- showed greater decreases in levels of depression than the control group,
- had improved levels of cognitive functioning,
- had increases in the mental component on the quality of life scale.

Nearly all the participants reported they liked their insect pets. Seventy-five percent of them said living with their crickets improved their mental health, and 40% thought the insects had increased their physical health. There were, however, several downsides to insect pet-keeping. One in four of the older adults said they felt sad if one of their crickets died. And 20% of the participants said they sometimes found taking care of the insects was a hassle.

Why Is This Study Important?

This research is special for several reasons.
Excellent methodology. This is one of the few clinical trials in which pets were randomly assigned to people. As a result, the study provides reasonably strong evidence that taking care of pet crickets caused impressive reductions in depression and more modest improvements in the cognitive functioning and quality of life of elderly people. In addition, most animal intervention studies are, in stat-speak, “under powered.” This means there are not enough subjects for us to be confident that the results are true. Indeed, the typical animal intervention study has only a couple of dozen subjects (here). In contrast, the Korean cricket research had nearly 100 participants. Thus the beneficial impacts of pets in this study are much more likely to be robust. I also liked the fact that the researchers did not "spin" (that is, over-sell) their results. They pointed out that some of the differences in the pet and no-pet groups were small and that the crickets had no impact on physiological stress, anxiety, or insomnia.

Practical applications. Compared to dogs and cats, crickets are inexpensive and easy to care for. They do not require much space, and they can be raised indoors. Thus crickets are ideal pets for elderly people, particularly those with limited mobility or who don’t have the money for the care and feeding, of, say, a dog.

Explaining the pet effect. Theories about why pets might improve the health and happiness of their owners focus on factors such mutual attachment (“the bond”), social support, or increases in exercise. But crickets do not provide the warm and fuzzies of a kitten or the social support of a beloved dog. Neither do cricket owners take their pets for walks or play Frisbee with them. Yet the size of the impact crickets had on the Korean subjects’ mental health was about the same seen in studies of dog owners. This finding undercuts the idea that the beneficial impact of pets on human psychological well-being is the result of unconditional love or social support provided by companion animals.

Purdue University's Alan Beck, a pioneer in the study of human-animal interactions, has suggested that the pet effect may be due, in part, to the fact that taking care of a pet, like activities such as gardening, painting, or even fishing, gives you something meaningful to do. In a recent interview, he said “Having to focus on the present is a wonderful way of managing stress, because stress is really just bemoaning the past and fearing the future. If you stay in the present, you don't have the freedom to worry about the past or future. An animal really holds your attention.”

Suze had the same idea. She told me her dad's little dog helped him get his mind off his own problems. I think she might be right.

Post script for researchers: Studies of the pet effect have produced a bewildering pattern of mixed results (see here). This is an important study, and I hope someone will replicated these results soon with other cultural groups.

References

