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### New Study Asks “Do Assistance Dogs Improve Mental Health?”

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# New Study Asks “Do Assistance Dogs Improve Mental Health?”

What a crack team of researchers discovered about the impact of assistance dogs.

Posted Dec 07, 2020

I'm a news junky. I wake up in the morning listening to the news on National Public Radio, and once in a while I even check out what Rush Limbaugh is up to.

Needless to say, I trust some news outlets more than others, and a source I hold in high regard is NPR's Morning Edition. Hence, I perked up last week during a segment when reporter Patti Neighmond discussed the financial stresses associated with pet ownership during the pandemic. [Neighmond's story](#) was compelling and mostly on the mark. But I was taken aback by her blanket assertion, “*Research shows having a pet improves both physical and mental health.*”

This claim is, unfortunately, false news.

Recently, in [this Psych Today post](#), Marc Bekoff correctly pointed out that *some* research has found that pet ownership is associated with better health and well-being. But Neighmond, like most journalists, is unaware of the growing number of studies that have found no differences in the mental or physical health of pet owners and non-owners.

Take, for example, research on the impact of [pets](#) on [depression](#). Over the last two decades, 21 published papers found no impact of pet-ownership on depression compared with 5 papers in which pet owners were less depressed than non-owner, and 5 that found pet owners were more depressed. (See [The Sad Truth About Pet Ownership and Depression](#).)

Some people, of course, have closer relationships with pets than others. A group that has particularly close affinities for their animal companions includes people who have assistance dogs to help with their disabilities. This group should especially likely to show psychological benefits from living with dogs. A

first-rate team of researchers from Purdue University's [Center for the Human-Animal Bond](#) recently decided to see if this was the case. They carefully examined the results of several dozen studies on the mental health and well-being of people living with trained assistance dogs. Their results were recently published in the journal PLOS ONE, and they were surprising. (You can read the full text of their article [here](#).)

## A “Study of Studies” of Assistance Dogs

The lead author of the research project was Kerri Rodriguez who is now a post-doctoral fellow at [Human-Animal Bond in Colorado](#) located at Colorado State University. As science journalist Julia Belluz [has pointed out](#), good scientists do not rely on the findings of a single study. Rather, they look for patterns of results in multiple studies. One mechanism for uncovering these patterns is called a “[systematic review](#).” This is a standardized method of comparing the results and methods of the available studies on a specific research topic.

The researchers focused on studies of the impact of assistance dogs on people with physical disabilities. Their systematic review included studies involving mobility service dogs, guide dogs for the blind, hearing dogs, and medical alert dogs. All the studies included either a comparison or control group as well as a service dog group. Also, the results had to be based on quantitative measures of mental health, social functioning, or quality of life. The researchers did not include studies on the impact of [therapy](#) animals, [psychiatric](#) service dogs, or emotional support animals.

## 27 Studies of People With Assistance Dogs

After an exhaustive literature search, the researchers identified 24 articles containing 27 individual studies conducted between 1994 and 2018. Half of the articles had been published in peer-reviewed scientific journals and the other half were unpublished master's theses and doctoral dissertations. Fifteen of the studies involved comparisons between people with assistance animals and a control group, and 12 compared the mental health of people before and after they got their assistance dogs. Most of the studies involved people with physical disabilities such as spinal cord injuries and muscular dystrophy who had mobility assistance dogs. These animals are trained to performed tasks like opening doors, retrieving objects, or turning on

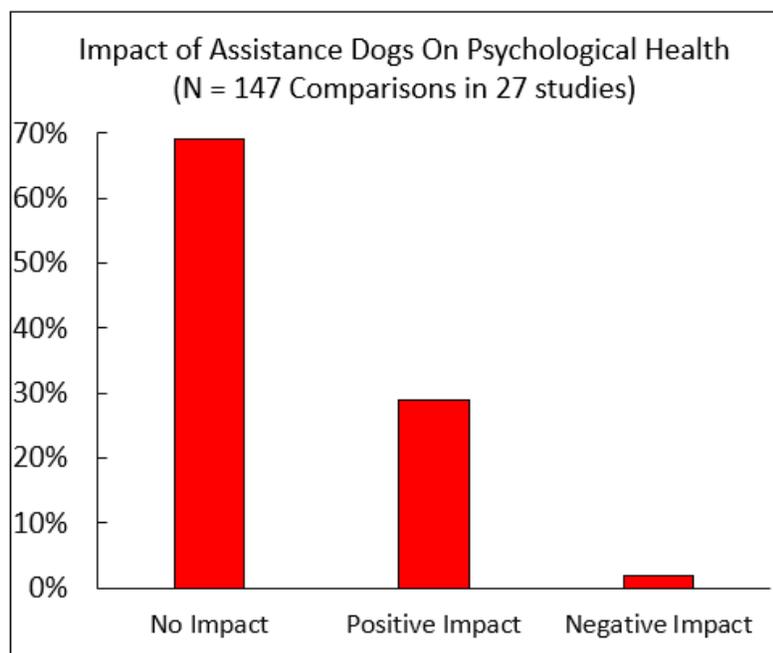
lights. The other studies involved people with guide dogs, hearing dogs, and alert dogs trained to warn of impending seizures or diabetic attacks.

On average, each of the studies included five different measures of mental health and well-being. Thus the researchers were able to look at statistical comparisons among 147 variables. These fell into four categories, each with several subcategories.

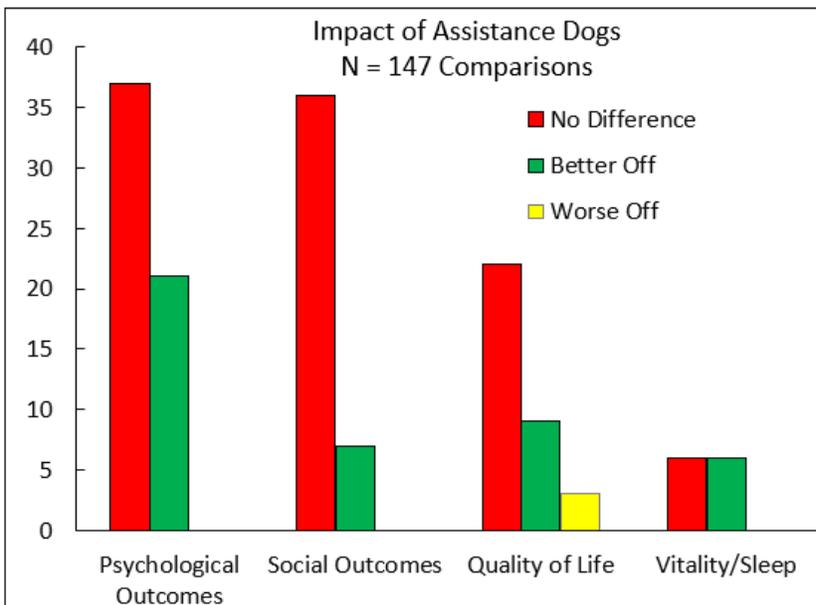
- *Psychological outcomes*: These included measures related to mental health, general psychological health, emotional health, and measures of self-evaluation such as [self-esteem](#) (58 comparisons).
- *Social outcomes*: These included measures of general social functioning, [loneliness](#), and social participation (43 comparisons).
- **Quality of life**: This category included overall quality of life, life satisfaction, and independence (34 comparisons).
- **Vitality**: These included measures of energy/vitality and quality of sleep. (12 comparisons).

## The Surprising Results

The overall results were clear. In nearly 70% of the 147 comparisons, there was no evidence that



assistance dogs had any impact on the mental health or well-being of their owners. Further, this pattern of “no differences” was found in three of the four major categories including measures of general mental health, the participants’ social lives, and their quality of life.



Source: Graph by Hal Herzog

The only exception was “vitality and sleep.” In half of the 12 comparisons in that category, owners of assistance dogs were better off. In short, the studies found that, for the most part, having an assistance animal did not improve the psychosocial adjustments, the quality of life, or the wellbeing of their owners.

Some of the null results were striking. For example, 18 of 19 comparisons involving loneliness found no differences between people who did and did not have assistance dogs. And in only one of six studies did people with assistance dogs score higher on measures of life satisfaction.

## The Dreaded "File Drawer Problem"

Finally, the Purdue team found clear evidence of the dreaded file drawer problem. Technically called, “positive [publication bias](#),” this is a phenomenon that plagues the social and behavioral sciences and biomedical research. It is the tendency for researchers to submit their successful experiments to journals and to relegate negative results to the proverbial file drawer. Positive publication [bias](#) is a huge problem in science. That's because if investigators

only publish their positive results, entire research fields can be built on a stack of cards. (See, for example, [studies of the impact of the hormone oxytocin](#) on

Remember that half of the research projects analyzed by the Purdue team were published and half were theses and dissertations that were not published. This enabled Rodriguez and her colleagues to assess whether positive results were more likely to be published in scientific journals. This is exactly what they found. For example, 82% of statistically significant comparisons appeared in published papers compared to 18% that appeared in unpublished theses and dissertations.

## The Take-Home Messages

I love it when researchers tell-it-like-it-is. Kerri Rodriguez and her associates were brutally honest in their conclusions. They wrote, *“Our results suggested that for most outcomes, having an assistance dog has no effect on psychological health and well-being.”*

This is an important study, and I hope it gets the [attention](#) it deserves. The investigators, however, only reviewed research on people with disabilities. Do these results even extend to pet owners generally? I think they might, but when I asked my wife about this, Mary Jean said probably not. But I pointed out to her that an increasing number of studies have found that pet-owning is not associated with improved health and [happiness](#). She is still not buying my argument.

Over the last 20 years, hundreds of studies have been published on what pet products corporations call "the pet effect." (See, for example, this [promotional campaign](#) by the [Human-Animal Bond Research Institute](#), an industry trade group.) But what we need now is less media hype and more high-quality systematic reviews like this one to make sense of the disparate findings related to the impact of pets on human health. Kudos to the Purdue researchers for raising the bar.

And, science journalists, take heed.

### References

Rodriguez, K.E., Greer, J., Yacilla, J. K., Beck, A.M, & O'Haire, M. (2020). The effects of assistance dogs on psychosocial health and wellbeing. A systematic review. *PLOS ONE*. <https://doi.org/10.1371/journal.pone.0243302>