Animal-Assisted Interventions for Autism Spectrum Disorder

Dr. Leanne Nieforth
1. Why animals?
2. What is an animal-assisted intervention?
3. What does the research say?
We’re inherently attracted to animals.

Biophilia hypothesis
Which number is highest?

- Number of people that go to US zoos and aquariums
- Number of people that go to NFL and NBA games
- Number of people that go to NHL and NFL games
- Number of people that go to NFL, NHL, NBA, MLB games combined
We’re inherently attracted to animals.

Zoos & aquariums have over 181 million annual visitors
More than NFL, NBA, NHL, & MLB annual attendance combined
We’re inherently attracted to animals.
The pet industry is lucrative.

90.5 million homes

↑ from 56% in 1988
What was the spending for the 2021 US Pet Industry?

- $99.2 Billion
- $123.6 Billion
- $1 Trillion
- $90.3 Million
Animals may impact health outcomes.
Animals can make us feel better.

- Improved mood
- Less perceived pain
- Lower blood pressure
- Lower stress hormones
Animals can make us look better.

Pet Wingman

45% more matches
75% more messages
53% more interactions
Animals can give us social support.
Animals are included in a variety of therapeutic settings.
1. Why animals?

2. What is an animal-assisted intervention?

3. What does the research say?
An intervention that intentionally includes or incorporates animals as part of a therapeutic or ameliorative process.

**Definition**

An intervention that *intentionally* includes or incorporates animals as part of a therapeutic or ameliorative process.
Animal-Assisted Intervention

Animal-Assisted ACTIVITIES

- Therapy Animal Hospital Visit
- Therapy Animal Nursing Home Visit
- College Exam De-Stress Events
- Crisis Response

Provide opportunities for motivation, education, or recreation to enhance quality of life
Animal-Assisted Intervention

**Animal-Assisted ACTIVITIES**

Provide opportunities for motivation, education, or recreation to enhance quality of life

**Animal-Assisted THERAPY**

Goal-directed and documented intervention as part of a treatment process

- Animal-Assisted Psychotherapy
- Animal-Assisted Social Work
- Animal-Assisted Physical Therapy
- Animal-Assisted Speech Therapy
Animal-Assisted Intervention

**Animal-Assisted ACTIVITIES**
Provide opportunities for motivation, education, or recreation to enhance quality of life

**Animal-Assisted THERAPY**
Goal-directed and documented intervention as part of a treatment process

**Animal-Assisted EDUCATION**
Planned and structured intervention with specific academic or educational goals

Animal-Assisted Reading Program
Science is needed to validate and understand the impact.
1. Why animals?
2. What is an animal-assisted intervention?
3. What does the research say?
Animals and Autism

- *A Friend Like Henry* by Nuala Gardner
  - The remarkable true story of an autistic boy and the dog that unlocked his world

- *Animals in Translation* by Temple Grandin and Catherine Johnson
  - Using the Mysteries of Autism to Decode Animal Behavior

- *The Horse Boy* by Michael Orescanin and Rupert Isaacson
  - How far would you travel to heal someone you love?
<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Authors</th>
<th>Journal</th>
<th>DOI</th>
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The field is growing.

- 14 studies in 24 years
- 28 studies in 4 years
- 43 studies in 5 years
The field is international.
The field is interdisciplinary.
What types of animals?

- Horse
- Dog
- Guinea pig
- Dolphin
- Cat
What terms are used to describe this?

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<th>equine facilitated</th>
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What do the sessions look like?

1:1:3
animals : participants : personnel

1:1:1

Weekly sessions
30-60 minutes
~10 hours
contact time
Who is in the sessions?

Children (average age 9-10 years old)

80% male
What were the outcomes?

Social interaction

# of Published Studies

Positive
Null
What were the outcomes?

Social interaction: 50 Positive, 10 Null
Language and communication: 25 Positive, 5 Null

# of Published Studies
What were the outcomes?

- Social interaction: Positive (45), Null (5)
- Language and communication: Positive (25), Null (5)
- Problem behaviors: Positive (15), Null (5)
- Positive emotions: Positive (10), Null (5)
- Stress: Positive (10), Null (5)
What were the outcomes?

- Social interaction
- Language and communication
- Problem behaviors
- Positive emotions
- Stress
- Autism severity
- Motor skills
- Caregiver stress
- Restricted and repetitive behaviors
- Quality of life

# of Published Studies

- Positive
- Null
Limitations

The current evidence is limited by methodological flaws.

- Lack of randomized clinical trials
- Many studies do not have a control group
- Small sample sizes
- Lack of diversity in sample sizes
Conclusions

Animal-assisted interventions for autism spectrum disorder are possibly effective, but future exploration is needed.

**Caution should be exercised in selected AAI as a complementary intervention**
Any questions?

Thank you!

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THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine
Is AAI appropriate?

Are there any contraindications?

What is the goal for participation in an AAI?

What quality programs are available in your area?