

Pawsitive Spirit

Research and evidence for school partnerships

An annotated bibliography for school administrators

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What the research supports

Peer-reviewed research offers a promising rationale for structured animal-assisted support in schools, particularly for reducing physiological stress and encouraging participation. Findings for social interaction and reading engagement are encouraging, but results vary across students, activities, and settings. Lasting academic gains and schoolwide effects remain less established. [1-6]

How to use this resource

This selected bibliography summarizes six peer-reviewed publications and explains their relevance to Pawsitive Spirit. It is an administrator resource, not a comprehensive systematic review. Some reviews include unpublished or non-peer-reviewed studies in addition to journal articles; those differences are identified in the annotations.

Begin with the classroom review [1] and the school stress trial [2]. The remaining articles address special education [3], peer interaction [4], reading [5], and the broader educational rationale [6]. Article links open the original sources.

What this means for a school partnership

Pawsitive Spirit can draw on this research to inform its design and evaluation. These publications do not evaluate Pawsitive Spirit or establish the effectiveness of its particular schedule, activities, staff, or dogs. MTSS alignment is an implementation choice to be developed with each school, rather than a finding demonstrated by this bibliography.

A reasonable pilot would define goals, record engagement, and assess change over time. Potential measures include voluntary participation, observed peer interaction, student-reported comfort, and return to learning. Counts of visits or students reached describe delivery; they do not by themselves demonstrate improved well-being.

Annotations describe published findings. Program applications and suggested evaluation measures are interpretations for school planning.

Classroom programs and stress reduction

1 Animal assisted interventions in the classroom

Brelsford, V. L., Meints, K., Gee, N. R., & Pfeffer, K. (2017). Animal-assisted interventions in the classroom—A systematic review. *International Journal of Environmental Research and Public Health*, 14(7), 669.

<https://doi.org/10.3390/ijerph14070669>

[Read the open access article](#)

Systematic review • Educational settings • Multiple intervention formats

Findings The review examined 25 papers, including 21 peer-reviewed articles and four grey-literature papers. Most reported benefits, but the methods, outcomes, exposure periods, and sample sizes differed substantially.

Relevance to Pawsitive Spirit Provides a broad school-based rationale for testing structured animal-assisted activities with clear goals and consistent delivery.

Limits The varied designs prevent a single conclusion about which format works best. The authors also identified insufficient reporting of risk assessment and animal welfare. Promising results do not establish universal effectiveness.

2 Dog assisted interventions and school stress

Meints, K., Brelsford, V. L., Dimolareva, M., Maréchal, L., Pennington, K., Rowan, E., & Gee, N. R. (2022). Can dogs reduce stress levels in school children? Effects of dog-assisted interventions on salivary cortisol in children with and without special educational needs using randomized controlled trials. *PLOS ONE*, 17(6), e0269333.

<https://doi.org/10.1371/journal.pone.0269333>

Randomized controlled trials • Schoolchildren with and without special educational needs

Findings Children received 20-minute sessions twice weekly for four weeks, with dog, relaxation, or no-treatment conditions. Mainstream pupils in dog sessions did not show the baseline cortisol increase seen in comparison conditions. Pupils with special educational needs showed reduced cortisol following group dog sessions.

Relevance to Pawsitive Spirit Offers direct experimental support for stress regulation as a school program goal, particularly through repeated, structured sessions.

Limits Cortisol is a physiological measure, not proof of improved grades, attendance, or clinical recovery. Results from this schedule cannot establish the effects of an occasional visit or a different program.

Special education and social interaction

3 Dog assisted support in special education

Meixner, J., & Kotrschal, K. (2022). Animal-assisted interventions with dogs in special education—A systematic review. *Frontiers in Psychology*, 13, 876290.

<https://doi.org/10.3389/fpsyg.2022.876290>

Systematic review • 18 experimental studies • Children with special educational needs

Findings The clearest findings concerned physiological stress responses, motivation, and participation in instructed activities. Results for academic and social outcomes were mixed. Study differences prevented a formal meta-analysis.

Relevance to Pawsitive Spirit Supports considering dog-assisted activities as one way to help some students participate in a calmer learning environment, with individualized goals and school-team input.

Limits The review found no long-term outcome data. Findings do not show that every student benefits or that animal-assisted activities replace specialized instruction or clinical care.

4 Animals and peer interaction among autistic children

O'Haire, M. E., McKenzie, S. J., Beck, A. M., & Slaughter, V. (2013). Social behaviors increase in children with autism in the presence of animals compared to toys. *PLOS ONE*, 8(2), e57010.

<https://doi.org/10.1371/journal.pone.0057010>

Comparative observational experiment • 99 children in 15 classrooms • Guinea pigs

Findings Groups included one autistic child and two typically developing peers. During brief animal sessions, autistic participants showed more social approaches, prosocial behavior, and positive affect than during toy sessions, and received more approaches from peers.

Relevance to Pawsitive Spirit Suggests that an animal can provide a shared focus that supports interaction. This offers a rationale for observing peer engagement during facilitated Pawsitive Spirit activities.

Limits This study used guinea pigs, not dogs, and measured behavior during short sessions. It does not establish lasting friendship, reduced bullying, or schoolwide belonging. Those outcomes require separate evaluation.

Reading engagement and educational design

5 Children reading to dogs

Hall, S. S., Gee, N. R., & Mills, D. S. (2016). Children reading to dogs: A systematic review of the literature. PLOS ONE, 11(2), e0149759.

<https://doi.org/10.1371/journal.pone.0149759>

Systematic review • Reading programs • Broad inclusion of research and grey literature

Findings The review found suggestions that reading to dogs may improve the conditions in which children practice reading. However, most included reports had low evidentiary strength, and the authors emphasized the need for stronger comparison groups and methods.

Relevance to Pawsitive Spirit Supports exploring voluntary dog-assisted reading as an engagement activity alongside established literacy instruction.

Limits The review does not establish a reliable causal improvement in reading performance. Greater enjoyment or willingness to read should be measured separately from fluency and comprehension gains.

6 Human animal interaction in school settings

Gee, N. R., Griffin, J. A., & McCardle, P. (2017). Human–animal interaction research in school settings: Current knowledge and future directions. AERA Open, 3(3).

<https://doi.org/10.1177/2332858417724346>

Peer-reviewed research overview • Educational theory and research priorities

Findings The authors propose that animals may influence learning indirectly through motivation, engagement, self-regulation, and social interaction. They describe supporting studies while calling for a more comprehensive evidence base.

Relevance to Pawsitive Spirit Helps frame Pawsitive Spirit around facilitated activities and measurable student experiences, rather than assuming that animal presence alone produces educational improvement.

Limits This is a research overview and conceptual account, not a trial of a specific intervention or MTSS model. Proposed pathways should be treated as explanations to investigate.

Conditions for responsible implementation

For school planning, use voluntary participation and a comparable option for students who avoid animals. Coordinate family communication, allergies and fear accommodations, hygiene, supervision, dog rest, and withdrawal when the animal shows stress. These are proposed implementation conditions informed by the safeguarding concerns in [1] and [6], not a claim that Pawsitive Spirit has already adopted every procedure.