Cuadernos de Neuropsicología / Panamerican Journal of Neuropsychology
2026, Vol. 20 N.º 2 13 - 15
ISSN: 0718-4123
DOI: 10.7714/CNPS/20.2.102

Editorial

THE THERAPEUTIC BEAST: Neuropsychology of the Bond and the Architecture of Animal Connection in Development

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It is a delightful irony that, after centuries of attempting to distance ourselves from the animal kingdom through language, formal logic, and complex psychopharmaceuticals, we end up admitting that a Golden Retriever with zero formal education can achieve clinical breakthroughs that sometimes elude even the most laureated therapists. As editors, we often view any intervention that does not undergo a double-blind study with skepticism, but the accumulated evidence on Animal-Assisted Interventions (AAI) finally compels us to lower our guard. We are not facing a passing fad; we are facing a first-order biopsychosocial tool.

The modern history of this discipline did not begin in the asepsis of a laboratory, but in Boris Levinson's office in 1962, when his dog, Jingles, decided to attend a session with a child with severe autism. What followed was not a miracle, but a phenomenon of social facilitation: the animal acted as a living "transitional object," allowing the patient to establish a bridge of communication with the therapist. Today, we understand that this "bridge" has a clear neurobiological architecture: it is not just "sympathy," but the activation of the endogenous oxytocin system that inhibits the amygdala's response to social stress (Rodriguez-Moya et al., 2025).

Labeling every interaction with an animal as "therapy" is a common error that we must eradicate from scientific literature. To ensure replicability, it is imperative to follow international taxonomy (IAHAIO, 2024):

While Activities (AAA) seek spontaneous emotional well-being, Therapy (AAT) is a structured intervention led by a health professional with specific goals documented in the clinical history. In an issue where we explore the architecture of reading literacy and executive functions in childhood, Animal-Assisted Education (AAE) emerges as an enriched environment that facilitates the neuroplasticity necessary for these processes.

In the field of physiotherapy, the animal is not a decoration; it is an intrinsic motivator. For example, it is well known that the presence of animals improves mobility and coordination. In patients with cerebrovascular accidents (strokes), interaction with the animal reduces the perception of effort during kinesiology, facilitating neuroplasticity through the activation of mirror neurons and the reduction of salivary cortisol levels (MDPI, 2025). The animal is not a toy; it is an environmental modulator that reduces the perceived "threat" of the clinical setting. The attentional focus shifts from pain to social interaction, resulting in a sustained reduction in blood pressure and heart rate.

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Table 1.
Technical Differentiation of Animal-Assisted Interventions (AAI)

Category	Definition and Primary Objective	Professional in Charge	Clinical Documentation
AAA (Activities)	Spontaneous or planned visits for motivational, educational, or recreational purposes. They do not require measurable clinical goals.	Properly trained volunteers or technicians.	Not required (only a log of visits and participants).
AAT (Therapy)	Structured and planned intervention for physical, cognitive, or emotional rehabilitation. It has specific health goals.	Licensed health professional (Psychologist, Physiotherapist, etc.).	**Mandatory**: It must be recorded in the clinical history with progress evaluations.
AAE (Education)	Focused on pedagogical and learning processes. It acts as an enriched environment that facilitates neuroplasticity and executive functions.	Psychopedagogue, teacher, or specialized educator.	Formal record of compliance with pedagogical and academic goals.

In the field of physiotherapy, the animal is not a decoration; it is an intrinsic motivator. For example, it is well known that the presence of animals improves mobility and coordination. In patients with cerebrovascular accidents (strokes), interaction with the animal reduces the perception of effort during kinesiology, facilitating neuroplasticity through the activation of mirror neurons and the reduction of salivary cortisol levels (MDPI, 2025). The animal is not a toy; it is an environmental modulator that reduces the perceived "threat" of the clinical setting. The attentional focus shifts from pain to social interaction, resulting in a sustained reduction in blood pressure and heart rate.

From a neuropsychological perspective, the animal acts as an external emotional regulator. In patients with depressive symptoms or generalized anxiety, a dog or cat provides sensory stimulation that interrupts negative rumination cycles. In the context of 2025, cutting-edge research on Post-Traumatic Stress Disorder (PTSD) suggests that AAT is particularly effective in reducing hypervigilance. The animal, by being relaxed, sends an "environmental safety" signal to the patient's limbic system—something that a human, with their complex and sometimes ambiguous body language, struggles to transmit with the same efficacy.

In addressing specific populations, the competitive advantage of the "beast" becomes evident. For a child with ASD or ADHD, for whom the human world is often a confusing and noisy roar, the animal provides a predictable and strictly non-verbal interaction: a constant and direct anchor amidst the chaos. Similarly, in the geriatric field, the intervention does not simply seek to alleviate idle time; its function is to dismantle the "triad of isolation"—that combination of loneliness, boredom, and lack of purpose that often plagues residences. By demanding attention, the animal produces a necessary ontological shift: it returns the role of caregiver to the elderly person, rescuing them from the institutionalized passivity that reduces them to being a mere "subject of care" (Frontiers in Psychology, 2024).

However, we cannot speak of behavioral science without mentioning the welfare of the animal. Following the "One Health" paradigm, current interventions require that the animal be a voluntary participant. International organizations such as the IAHAIO stipulate that the exhaustion of a therapy dog invalidates clinical results, as a stressed animal cannot facilitate the patient's emotional regulation. It is no longer enough for the animal to "not bite"; 2025 protocols require an evaluation of the animal's affective state through the observation of stress micro-signals and the measurement of biomarkers such as

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cortisol in the therapy dog, ensuring that the "co-therapist" is not a victim of the clinical process. According to IAHAIO guidelines, any program that does not guarantee the animal's withdrawal upon signs of compassion fatigue, or that does not have a certified professional handler, lacks ethical validity and, by extension, scientific rigor.

A review of the available hard data indicates that the "therapeutic beast" is, in reality, a catalyst for our own biology. Animal-assisted therapy does not replace psychopharmacology or traditional behavioral therapy; it enhances them. As researchers, our duty is to strip these interventions of mysticism and continue providing hard data that validate what Levinson suspected decades ago: that sometimes, the best path toward human mental health has four legs and a tail

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