REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 23, No.4 (2022)
http://www.veterinaria.org
Received: 22 May, 2022 Revised: 02 June, 2022 Accepted: 06 July, 2022

The Human-Animal Bond and Mental Health: A Social Science Perspective on Animal-Assisted Interventions

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ABSTRACT
This comprehensive review examines the intersection of the human-animal bond (HAB) and mental health through a psychosocial and social work lens. To establish a pre-pandemic baseline, this paper evaluates literature published exclusively prior to 2021. The manuscript explores the theoretical foundations of companion animals and structured Animal-Assisted Interventions (AAI) across various populations, demonstrating their efficacy in mitigating psychological distress and fostering social inclusion. Crucially, this review addresses the ethical imperatives of animal welfare within therapeutic settings and highlights the emerging interdisciplinary field of Veterinary Social Work (VSW). By utilizing a "One Health" framework, this manuscript outlines how integrating social workers into veterinary environments improves clinical workflows, manages client anxiety, and mutually benefits human and animal well-being.

Keywords: Human-Animal Bond, Animal-Assisted Therapy, Veterinary Social Work, One Health, Animal Welfare

1. Introduction

The human-animal bond (HAB) is a mutually beneficial and dynamic relationship between people and animals, historically rooted in functional partnerships but increasingly defined by emotional interdependence [1]. In recent decades, social sciences and veterinary medicine have converged to study this bond's impact on human psychological well-being. Positive interactions with companion animals can induce physiological calming, reduce psychological distress, and decrease perceived loneliness [2]. In clinical social work and allied health practices, this bond is operationalized through Animal-Assisted Interventions (AAI), which incorporate trained animals into goal-directed treatment plans [3]. This review synthesizes foundational literature to detail the biopsychosocial mechanisms of the HAB, its impact on human well-being, and the ethical integration of these practices within veterinary frameworks.

2. Methodology and Search Strategy

A narrative review of the literature was conducted to synthesize foundational research on the psychosocial impacts of AAI and pet ownership. Electronic databases, including PubMed, Scopus, and PsycINFO, were queried using combinations of the following terms: "human-animal bond," "animal-assisted therapy," "mental health," and "veterinary social work."

Constraint Justification: To establish a clear, pre-pandemic foundational baseline of AAI literature-free from the anomalous surge in human-animal bond studies triggered by COVID-19 lockdowns-inclusion criteria were strictly limited to peer-reviewed articles published prior to January 2021. This deliberate parameter allows for the evaluation of AAI under standard societal conditions.

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3. The Biopsychosocial Mechanisms of the Human-Animal Bond

Understanding the efficacy of the HAB requires examining the underlying biological, psychological, and social mechanisms that facilitate human health improvements.

Biological Mechanisms: Pre-2021 neurobiological research extensively documented the "oxytocin hypothesis." Interactions with friendly animals stimulate the release of oxytocin, a neuropeptide associated with social bonding and stress buffering, while simultaneously decreasing cortisol levels [4]. However, it must be noted that these biological responses are not uniform; neuroendocrine regulation depends heavily on the animal's temperament, the duration of the interaction, and the human's prior familiarity and comfort with animals [4].

Psychological and Social Mechanisms: Animals provide a safe, predictable relational dynamic that can gradually rebuild trust for individuals who have experienced trauma [1]. Socially, companion animals act as "catalysts." Studies show that individuals accompanied by animals in public experience higher rates of positive verbal engagement from strangers, an "ice-breaker" effect crucial for marginalized populations experiencing social withdrawal [2].

4. Efficacy Across Vulnerable Populations

A significant body of pre-2021 research highlights the protective effects of AAI and pet ownership across the lifespan [3, 5].

Older Adults: Pet ownership acts as a buffer against age-related social isolation. Data indicates that owning a pet serves as a protective factor for life satisfaction, particularly for older adults living without a spouse or facing barriers to community participation [5]. Furthermore, pilot studies demonstrate that AAI protocols improve reality orientation and reduce agitation in patients with age-related cognitive decline [6].

Psychiatric and Trauma Support: For adults managing severe psychological trauma or chronic stress, animals offer critical, non-evaluative support. The routine required for animal care provides daily structure and a sense of purpose, combating avolition. Equine-facilitated psychotherapy, in particular, requires participants to regulate their own emotional state to successfully interact with the horse, directly translating into improved emotional regulation for the human patient [3].

5. Ethical Considerations and Animal Welfare

From a veterinary perspective, the application of AAI must adhere to strict ethical guidelines to ensure the well-being of the animal. A critical review of pre-2021 literature emphasizes that therapy animals are susceptible to burnout, acute stress, and compassion fatigue [7].

Working in unpredictable therapeutic environments or interacting with highly dysregulated patients can elevate canine stress levels, observable through behavioral markers (e.g., lip licking, yawning, avoidance) and physiological markers like elevated salivary cortisol [7]. Equine-facilitated therapies must similarly monitor for stress signals in horses, such as ear pinning, tail swishing, or distinct avoidance behaviors [7]. Ethical AAI requires handlers and social workers to explicitly advocate for the animal's right to rest. Within a "One Health" paradigm, human therapeutic gains cannot be prioritized at the expense of the animal's welfare.

6. The Role of Veterinary Social Work (VSW) in Clinical Practice

The deep emotional integration of animals into human family systems has necessitated the formalized sub-discipline of Veterinary Social Work (VSW) [8]. Bridging veterinary medicine and social sciences, VSW provides distinct operational benefits to the practicing veterinarian:

Improving Clinical Workflow and Client Compliance: Veterinarians frequently encounter clients experiencing acute grief or anxiety regarding treatment costs. Social workers integrated into veterinary clinics can mediate these psychosocial crises in the waiting room. By handling non-compliant or emotionally dysregulated clients, social workers allow veterinarians to focus entirely on clinical medical care and improve client adherence to treatment plans [8].

Mitigating Clinic Burnout: Veterinary professionals experience disproportionately high rates of burnout and moral distress. VSW provides systemic interventions to support the mental health of veterinary clinic staff, reducing turnover and compassion fatigue [8].

Cross-Reporting Interventions: VSW cross-trains professionals to recognize the link between human and animal violence, facilitating appropriate reporting when animal abuse serves as a sentinel indicator for domestic violence.

7. Limitations

This review is limited by its methodological constraint to pre-2021 literature, excluding the influx of human-animal bond research conducted during the COVID-19 pandemic. Furthermore, many studies reviewed within this foundational era of AAI literature feature small sample sizes, rely heavily on self-reported psychological metrics rather than clinical diagnoses, and often lack longitudinal follow-up [3, 5].

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8. Conclusion

The integration of animals into psychosocial care represents a vital, evidence-based intervention strategy. Foundational literature demonstrates that the human-animal bond reduces isolation and provides a unique modality of social support. For veterinary professionals and social scientists, recognizing and utilizing this bond through a collaborative "One Health" approach ensures optimal outcomes. Future multidisciplinary practice must rigorously safeguard the welfare of therapy animals and expand Veterinary Social Work to support the clinical efficiency and mental well-being of veterinary practitioners themselves.

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