

Forum

Applying One Health to the Study of Animal-Assisted Interventions

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Abstract: The use of animal-assisted interventions in therapeutic programs is a growing phenomenon. Animal-assisted interventions (AAIs) involve a variety of species (dogs, cats, horses, domesticated birds, etc.) in primary health care. Despite their increasing application in a wide range of therapeutic services, the empirical evidence base of AAIs is limited. The authors of this paper propose that the public health framework of One Health can be adapted to advance AAI research. One Health's perspective on the environment is primarily ecological. The environmental impact on the human–animal interactions within AAIs, however, incorporates social, cultural, political, and economic factors. The environment has received minimal attention in AAI research. The authors discuss how this framework has been used in their prior AAI research and work with Indigenous people. Applying this framework to AAIs may guide future AAI research.

Keywords: One Health, animal-assisted interventions (AAIs), zooeyia, human–animal bond, social environment, indigenous worldviews, research framework and AAIs

An animal-assisted intervention (AAI) is “any intervention that intentionally includes or incorporates animals as a part of a therapeutic or ameliorative process or milieu” (Kruger and Serpell 2006, p. 25). AAIs involve a variety of species (dogs, cats, horses, domesticated birds, etc.) in primary health care. Despite their increasing application in a wide range of therapeutic services, the empirical evidence base of AAIs is limited (Kamioka et al. 2014; Maujean et al. 2015). The public health framework of One Health can be adapted to advance AAI research.

One Health takes a multi-disciplinary approach to optimizing the health of humans, animals, and the environment (One Health Initiative, nd). The roots of One

Health are in nineteenth century comparative medicine, which used animal models to advance human medicine. In 1984, Calvin Schwabe identified ‘One Medicine’ as considering “the close systematic interaction of humans and animals for nutrition, livelihood and health” (Schwabe, 1984 in Zinsstag et al. 2011, p. 151). One Medicine evolved into One Health in 2004, integrating human medicine, veterinary medicine, and environmental sciences. One priority is preventing the emergence and spread of zoonoses—diseases that spread from animals to people—to protect human health (Canadian Public Health Association). Hodgson and Darling (2011) introduced the concept of zooeyia to the One Health field in 2011 as “the positive inverse of zoonosis” (p. 189), the multiple benefits to human health from interacting and bonding with companion animals. Zooeyia provides “the evidence base for the

philosophical construct of the human-animal bond” (p. 190). The human–animal bond is “a mutually beneficial and dynamic relationship between people and animals that is influenced by behaviors that are essential to the health and wellbeing of both. This includes, but is not limited to, emotional, psychological, and physical interactions of people, animals, and the environment” (American Veterinary Medical Association, nd, para. 2). The strength of this bond and its potential implications for human health and wellness are the fundamental premise of AAIs.

One Health’s perspective on the environment is primarily ecological. The environment has received minimal attention in AAI research. Applying the One Health framework to address the animal–human–environment interface in AAIs is not straightforward. For example, the transmission of dermatophytosis (ringworm) is directly affected by the interaction of humans, animals, and social and ecological factors. The environmental impact on the human–animal interactions within AAIs, however, incorporates social, cultural, political, and economic factors. The complexity of the AAI–environment interface must be recognized to move AAI research forward. Indeed, the social environment is relevant to One Health; people and animals exist in social communities. For example, those faced with ill health, such as mental health or addictions, need to effectively re-integrate within the ecologies of their families and society at-large.

In AAIs, the animals themselves are the health intervention. They enhance positive feelings in people, raise oxytocin levels, encourage clients out of emotional numbness, and foster trusting and non-judgmental relationships (Miller et al. 2009; Palley et al. 2010; Burger et al. 2011; Handlin et al. 2011; Anson 2014). An understanding of how this occurs must acknowledge and appreciate the animals’ contribution to both sociality and the emergence of new and dynamic social environments. The animals interact with people in at least two ways, often simultaneously—individually, and in concert with their human handlers or clinicians.

Highly industrialized and technology-driven societies increasingly disconnect people from nature. This split can have a negative effect on mental, physical, and spiritual health. A connection with other living organisms (“biophilia”) is considered a fundamental, biological human need (Wilson 1984; Kellert and Wilson 1993; Kahn 1997). Companion animals are a connection to the natural world. The human–animal interaction is a potential space for human healing, specifically attending to the split between

nature and the human spirit (Katcher and Beck 1987; Berry 1990; Nebbe 2000; Melson 2008). Relationships with pets, the closest of all human–animal relations (Franklin 1999), may fulfill this biophilic need. Deep bonds between therapy animals and people have been likewise documented in AAIs (Dell et al. 2011; Hanrahan 2013).

The One Health concept focusses on the interface of humans, animals, and the environment, and how each affects health. Applying this framework to AAIs permits focused reflection on how AAIs contribute to human wellbeing, on the welfare of the animal, and on the environment. The significance of this interface arose in the authors’ prior work with Indigenous people who consider the wellbeing of animals, people, and the environment in equal measure. In their recent community-based study of an Equine Assisted Learning program for Indigenous girls in an addictions treatment facility in Canada, they concluded that the mutual interactions of humans (facilitators), animals (horses), and the environment (program content/context) contributed to the youths’ wellbeing (Adams et al. 2015). Similarly, their work with Campbell Papequash of Key First Nation and other Indigenous Elders acknowledges the equal interdependence of humans, animals, and the environment (Papequash Elder 2011; Honouring Our Strengths 2014). Linklater’s (2014) work on healing and wellness in Indigenous communities provides a graphic illustration, a painting by Ben Schofield, Anishinaabe from Serpent River First Nation Canada. A turtle is depicted reflecting on the state of Turtle Island (i.e., North America) through the relations among all equivalent beings of Creation—humans, animals, and the environment. Some recent interpretations of One Health support this egalitarian consideration of the health of all three elements (Natterson-Horowitz and Bowers 2013; University of Saskatchewan 2014). However, others critique the One Health concept as inherently anthropocentric, cogently arguing that human health benefits first from this approach, and raising concerns about the implications for the environment and all its inhabitants (Hanrahan 2014).

The One Health concept is not the first attempt to account for the animal–human–environment interface. Some synergy is also found with non-Western understandings, including Indigenous worldviews. This paper is a first attempt to consider how a One Health framework may guide future AAI research. By acknowledging the potential contributions of One Health, we can begin to unfold a complex understanding of AAIs. Further exploration may overcome significant barriers to AAI research.

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