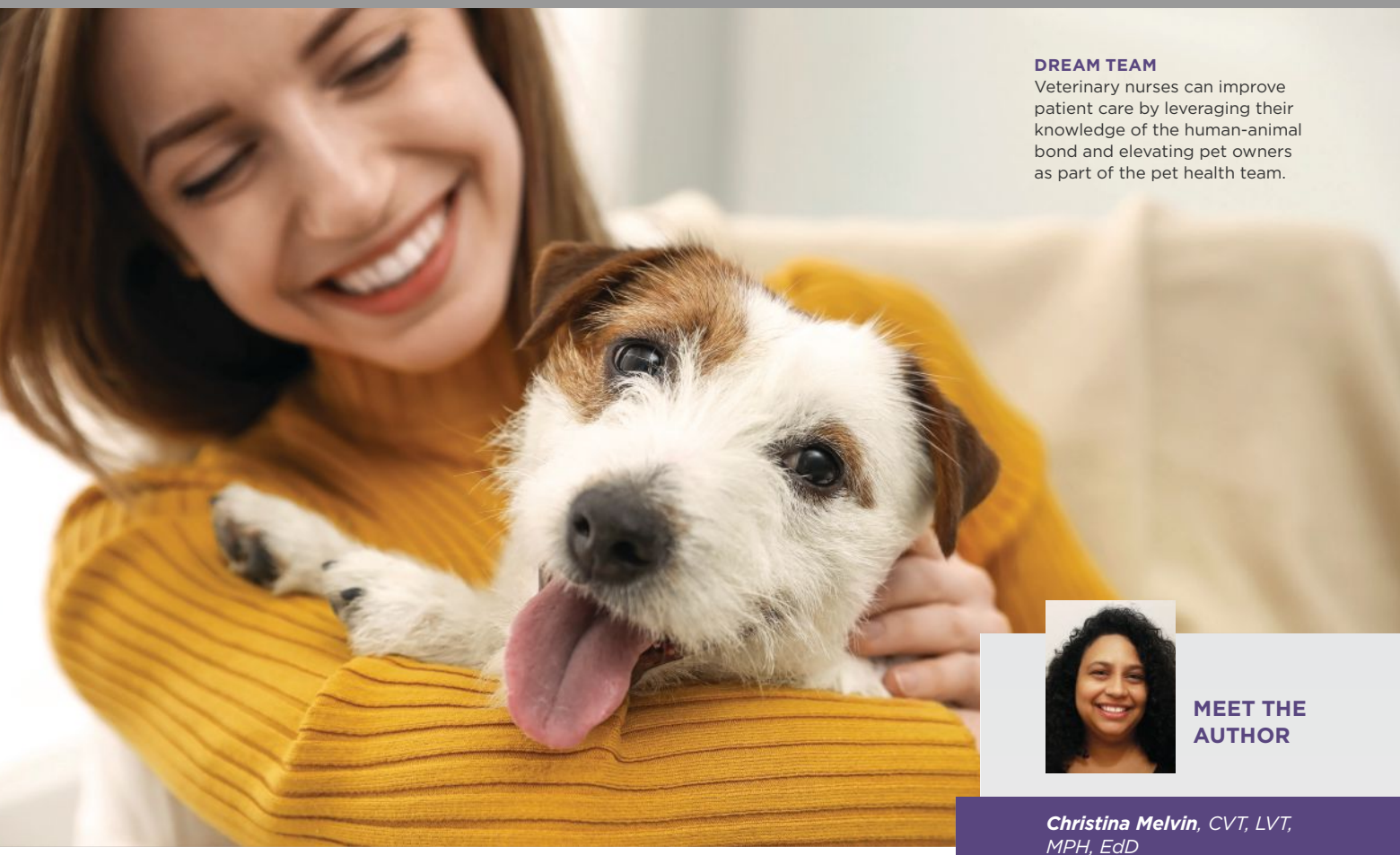

DREAM TEAM
Veterinary nurses can improve patient care by leveraging their knowledge of the human-animal bond and elevating pet owners as part of the pet health team.

MEET THE AUTHOR

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History and Science of the Human-Animal Bond

Humans have always exhibited a fascination with animals. Ancient cave art in Borneo depicting bovine-type creatures and domestication of animals illustrate how animals have played a significant role in human civilization for thousands of years.[1] While human relationships with animals continue to evolve, there is a wealth of knowledge gathered from the historical and scientific aspects of the human-animal bond. Acknowledging these aspects increases the strength of the human-animal bond and improves the ability of the veterinary team to provide the highest quality patient care.

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WHAT IS THE HUMAN-ANIMAL BOND?

According to the Human Animal Bond Research Institute (HABRI), 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 well-being of both."[2] The emotional, psychological, and physical connections people have with animals and the environment are also incorporated into the definition of the human-animal bond.[2] Relationships between humans and animals vary, ranging from non-pet animals used in production and service to the most doted upon family pets, with the majority of animal owners in the middle of this range.[3] Therefore, relationships and attachment can vary among people and the animals in their lives. These relationships are also situational and conditional, depending on how humans view the animal.[4] For example, a dedicated dog owner may enjoy a medium-rare steak, but balk at the thought of eating horse meat. The historical and scientific context behind the human-animal bond provides a deeper understanding of the relationships between humans and animals, offers insight into how fulfilling this bond can be, and helps the veterinary team better integrate the bond into clinical culture.

WHY ANIMALS?

Humans desire secure connections and will seek attachment from inanimate objects and/or living organisms.[4] Although human attraction toward living entities may vary, people are still interested in learning more about animals. One explanation of this interest and attraction is the biophilia hypothesis, introduced by American ecologist E.O. Wilson in 1984. Biophilia is defined as the human inclination to fixate on various aspects of natural life, combining emotional tendencies for living beings and nature. Biophilia is a complex, multifaceted concept, influenced by environment and culture. Humans learn to assign value to certain aspects of nature based on ecology and co-evolution with flora and fauna. Animals offer a direct link to nature, piquing human attraction and interest. Humans may express a variety of emotions toward animals, including positive emotions such as joy, negative (or undesirable) emotions such as apprehension, and neutral emotions such as indifference.[4] Despite the variety of emotions, the appeal of becoming more connected to nature through animal encounters encouraged early humans to develop an assortment of relationships with the creatures in their environment.

EARLY HISTORY

Hunter-gatherer societies dominated early human civilization, creating opportunities for human involvement and interactions with the animals in their environment.[4] It is likely these first interactions were centered on humans obtaining resources from animals, such as meat, bones, and skins. However, as humans continued to coexist with animals, humans found similarities between themselves and the animals they encountered. Humans also became more invested in the activities of animals, such as identifying migratory patterns, food sources, and behavior.[5] Animals were eventually included in cultural ceremonies through worship, sacrifice, and symbolism. The increased interaction with animals led to anthropomorphizing, or ascribing human characteristics to animals,[5] which was reinforced by physical appearances such as facial features (i.e., eyes, mouth) that were attributed to human emotions. Anthropomorphism contributed to domestication, especially with animals that demonstrated a connection through gaze or facial features.[5] As humans formed closer bonds with animals, specific traits such as docility, manageable size, and juvenile features were desirable, and those animals were permitted to join human encampments. Humans soon learned they were capable of selecting specific animals to breed and propagate these traits, transforming species of animals to meet human wants and needs.[6]

Domestication involves the human intervention of breeding animals with those desired traits while discouraging breeding of animals without those desired traits. This biological process changes the frequency of those traits, impacting the genetic profile of the animal.[7] However, there are characteristics that are not altered in the domestication process. Physiological and behavioral processes such as gestation period and social patterns are similar among canine species despite variations in size and appearance. Characteristics such as size, physical features (i.e., coat color and texture), and aggression could be manipulated over several generations.[7] Animals bred for desired traits resulted in better companions for work, comfort, and food sources.

Juvenile appearances were desired for several reasons. Young animals tend to share features related to young humans, such as large eyes on a small face, larger foreheads, and a softer appearance.[4] Juvenile animals also retain underdeveloped features such as smaller teeth, horns, and composition of fur.[6,7] Neoteny, or the retention of juvenile appearances in adults, drove the selection of these traits for fiscal and social purposes.

As society and human-animal relationships continue to evolve, there has been an increase of knowledge regarding the science of the human-animal bond.

Food animals such as cows and pigs yield higher meat and fat on bodies that preserve juvenile characteristics.[6] The playful behavior of young animals improved manageability of carnivorous mammals; therefore, retaining those "cute" appearances such as small stature was desired for companionship.[4,7]

ROLES OF ANIMALS

The introduction of domestication created new roles for animals beyond sustenance. Dogs are the earliest known domesticated animals, and hunter-gatherer societies used early canid species to assist with hunting and taking down prey.[6-8] The introduction of agriculture animals fulfilled utilitarian roles, providing work, service, and means of renewable food and materials. Since domesticated animals served a purpose beneficial to humans and their communities, care was taken to successfully rear and nurture each generation.[6]

As humans continued to invest in the propagation of domestic animals, the roles of some animals changed from utilitarian to companionship, introducing the concept of a pet.[6] Pets are generally considered animals that are not primary food sources, yet provide pleasure and/or companionship. This companionship fosters attachment, fulfilling an innate human need to bond.[9]

While the majority of these owner-pet relationships are positive for both the human and the animal, there are consequences to this increased bonding. Companion animals have a tendency to decipher human cues and signals, and are able to discern between recognizable and unrecognizable humans.[6] For example, dogs raised in a single home from an early age create strong bonds with their owners, but may have a reduced ability to appropriately interact with other humans they do not recognize. Dogs may develop strong attachments to their owners and experience separation anxiety when the owner is removed from the environment. If pets regard humans as conspecific, there may be conflict resulting in threatening behaviors such as biting.[6]

SCIENCE OF THE HUMAN-ANIMAL BOND

The historical perspective of human-animal relationships provides a foundation to further continue the understanding of the human-animal bond. As society and human-animal relationships continue to evolve, there has been an increase of knowledge regarding the science of the human-animal bond. Positive psychological, physical, and physiological outcomes have been associated with close human-animal interactions. Conversely, negative outcomes have also been associated with those same human-animal interactions.[10]

Animals have been used in therapeutic environments in areas such as psychology, physical development, and physiology long before the advent of current animal-assisted therapies.[11] Animals were assisting the blind in the 19th century, and Florence Nightingale alluded to the soothing and pleasure patients could gain from animal companionship.[11] Animal-assisted interventions (AAIs) have been utilized to address psychological conditions such as depression and social/developmental conditions such as autism.[11] For example, withdrawn patients were able to connect with dogs, encouraging communication and improving interactions with healthcare staff.[11] Animal interaction has also been associated with a decrease in blood pressure, increase in exercise, and improved mood.[4] However, additional research is still necessary to provide valid data to support the data gained from previous studies.[6,11]

While AAI is an exciting and innovative strategy to improve human health outcomes, there are consequences resulting from close animal interactions. Animal safety and welfare have to be considered when using AAI strategies. The enjoyment of the interaction needs to be mutual, where both the human and animal benefit.[11] Animals used in AAI should undergo a thorough behavioral assessment and be examined by a veterinarian. The other areas of concern are zoonotic risk and safety for both the human and animal, such as disease transmission and allergies.[10]

The science of the human-animal bond is not limited to human benefits and consequences. Pets benefit from lower heart rates, reduced stress, and improved mood.[4] Pets that are well cared for benefit from improved

nutrition and availability of food.[12] However, the availability of food occasionally becomes detrimental when the pet owner overfeeds, increasing the pet's risk for obesity and associated ailments.[12] Pet owners may alter the pet's food so that it becomes more similar to theirs, such as vegetarian and vegan diets.[12] Finally, artificial selection has resulted in detrimental modifications to breed characteristics such as exaggerated brachycephaly, negative behavior, and disproportionate anatomy.[12]

THE ROLE OF THE VETERINARY NURSE

The role of the veterinary nurse is imperative when adopting human-animal strategies and techniques to incorporate into the clinical environment.

Incorporating key aspects of the human-animal bond throughout the patient's visit improves delivery of care by emphasizing teamwork and collaboration with the client, reinforcing the common objective of providing high-quality care and concern for the patient's wellbeing.

Each member of the veterinary team has a unique task in providing care for the patient. Drs. Katie Niksich and Carlo Riolo, practitioners in Wisconsin, are examples of veterinarians who work to incorporate knowledge of the human-animal bond into multiple aspects of their clinical work. In their practice, the client's role is recognized and included in a collaborative approach to treatment. The client's role is both patient and client, and the caregiver is taught by the veterinary healthcare team how to continue the patient's care for the rest of its life.[3] This approach acknowledges the client's bond and attachment to their pet and identifies the client's role in the care of the patient while continuing to provide high levels of care to all patients. The inclusion of all members of the team improves trust and demonstrates an understanding of the bond the client has with their pet. Veterinary nurses can expand their knowledge of the human-animal bond. There are human-animal bond certifications and courses (including the Human-Animal Bond Certification developed by the NAVC and HABRI), various professional development opportunities from a variety of vendors, and a Veterinary Technician Specialty in Animal Behavior.

CONCLUSION

Historically, humans have displayed an interest in and connection to nature, forming relationships and eventual bonds with animals in their environment. While early human-animal relationships were more utilitarian, the role of animals changed, evolving to include companionship. Varied opportunities for human-animal interaction led to deeper connections between humans and animals, and the resulting bonds fulfilled the human desire to build stronger ties with animals. The science behind the human-animal bond highlights the psychological, physical, and physiological aspects of the bond, improving and promoting positive health outcomes. However, the increased interaction with animals puts humans and animals at risk for illness and injury. The veterinary nurse acknowledges the variety of human emotion and bonds between species, and uses that knowledge to create a sense of teamwork and empathy, improving patient care. Furthermore, the veterinary nurse understands the science of health benefits and disadvantages of the human-animal bond, and is able help educate the patient's caretaker. There are several opportunities for veterinary nurses to improve their knowledge of the human-animal bond and promote best practices. TVN

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