



## Review Article

# REVIEW OF SOCIAL, PHYSIOLOGICAL AND PSYCHOLOGICAL IMPACT OF HUMAN AND PET INTERACTION: AN INDIAN PERSPECTIVE

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**Abstract:** Humans have many reasons for owning pets including mutual relationship with person and it has been documented throughout history, across cultures and in recent research. As compared to other domestic animals the dogs have developed special relationship with humans. The attachment requires specific responses brought about by neuro endocrinological homeostatic functions as well as behavioural aspects. Companion animals provide association in a person's life, more consistent and reliable than human-human that augments and helps making relationships with other humans. Dogs are a symbol of our own "memory of the magical once-in-a-lifetime bond" we shared with our mothers. People give and receive complete and total love and devotion through their pet and therefore mental calmness and relaxation that's why dogs are idealized in modern society.

**Keywords:** Companion animals, Health, Behaviour, Wellbeing

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## Introduction

Long back even before human beings settled into an agricultural communities, they kept wild and tamed animals as companions [1]. It is evidence from tomb paintings, artefacts, and texts reveals that people at all levels of society kept dogs as loved pets and members of the family. The dog is the oldest domestic animal-whose care, feeding, and breeding is under human control. Throughout the ages, dogs have also influenced and inspired art and language, just as they do today [2]. The dog was the first mammal to be domesticated, and its relationship with humans began between 14 000 years [3] and 15,000 years ago [4]. Since then it has lived in close association with humans performing a variety of roles in daily life. The term pet derived from the French word "petit" and has long been the affectionate term for animals kept for pleasure and companionship [5]. Cows are considered the holiest of all creatures in India and the mother of all human beings. The two sacred cows called Kamdhenu and Surabhi emerged during churning of ocean. Lord Krishna spent his childhood with grazing cows in Gobardhan parvat and he himself worshipped them. Chetak Horse -the symbol of strength and leadership was ever companion and its loyalty, heroism and wisdom illustrated best in the Haldighati battle. He rescued his owner-Maharana Pratap from the battlefield to a safe place till he breathe his last. Similarly, the tenth guru of Sikhs Guru Gobind Singh Ji is always portrayed with a white eagle sitting on his left hand.

## Companion animals in Modern India

In India, if there are pets, then only dogs are visible. People hardly keep any other animal like Cat, Parrot or Hare as pets. In present society dogs play in satisfying human needs for companionship, friendship, unconditional love, and affection — all of which have become increasingly hard to satisfy in "our nuclear families living impersonal suburban lifestyles" [7]. In nuclear family, the people feel separation from farm animals and nature due to globalization and industrialization make them busier that might have stimulated to bring companion animals into our lives [8]. The biggest shift has been that the pets today are considered family members.

People no longer refer to themselves as pet owners, but as 'proud pet parents'. And many, in fact, see pets as the first extension of their family, before having children. Getting a pet is like having a child, with lesser responsibility [9]. In the year 2015 the pet-care industry got its share of apps. Bark N Bond, a city-based dog-training consultancy, launched an iOS app that enables to locate pet grooming, accessory stores and veterinarians in ones vicinity. It helped one finding home-spa services for the pet. It seems caring for a pet is same as any other hobby, like travelling or photography. So people are quitting corporate jobs to venture into the pet care sector [9]. Recently, The Supreme Court of India allowed the elimination of only irretrievably ill or wounded stray dogs in "humane manner" and asked all states and central territories to go by the central rule on the issue [10].

## Companion animals and rest of the world

In ancient times, animals have been respected as essential partners in human survival, health, and healing. In Japan, the royal family kept dogs in their private quarters to warn them of intruders and also to warm them in bed in winter. In the 19th century, Queen Victoria, who was fond of dogs, had around 90 different pets during her life. In the royal court of China, Pekinese dogs were bred very small to fit into an empress's sleeve, to be carried around the palace. The most common reason for owning a dog in the Western world is companionship [11]. In America, more than 60% of households have pet [5]. There, the pet owners regard their pets either friends (95%) or family members (87%). Some give their pets a holiday present; 87% include their pets in holiday celebrations; 65% sing or dance for a pet; 52% prepare special meals for their pets and 44% percent take their pets to work, boosting morale and productivity [12]. Recently, Daisy, a Labrador dog was working in a revolutionary way to detect cancer in London. She was a pioneer in sniffing out cancer cells in breath and urine samples within 10 seconds, providing research that will be instrumental in the future of the detection of the disease. In 2014 she was awarded the Blue Cross medal 'after saving hundreds of lives,

including that of her owner, by detecting her cancer', Dr Claire Guest. Dr Guest credits Daisy with saving her own life when she detected her breast cancer. Daisy's bizarre behaviour at the time prompted Dr Guest to get herself checked out incredibly early, helping doctors to treat the cancer more quickly [13].

### Concept of dog and human bonds

Why dogs have mental and physical effects on humans remains unclear, yet there are some hypotheses [14] which suggests that humans develop positive feelings and behaviour while caring for dogs because a bond similar to that in human mother-infant relationships that may form between humans and dogs [15]. A study showed that breastfeeding in humans after physical exercise attenuated the release of cortisol as well as adrenocorticotrophic hormones into the bloodstream [16]. Similarly, intranasal administration of oxytocin passes directly into the brain [17], suppressed cortisol response to psychological stress as well as attenuated emotional functions after stress episodes [18]. These results indicate that oxytocin attenuates not only the HPA axis response to stress, but also reduces negative emotions. Although there is no direct evidence that oxytocin mediates social bonding in humans, some studies have suggested oxytocin related infant-mother bonding and social relationships [19]. Thus, oxytocin plays an essential role in the neural mechanisms of social bonding and stress buffering. Further, a visual cognitive ability, particularly gazing-an important social cue in humans that also developed in dogs as a by-product of their domestication, and a behaviour required for a symbiotic relationship with humans [20] causes effect on the concentration of oxytocin in the urine in dog owners by their dog's gaze, which may function as an attachment behaviour [21]. However, it is still unclear whether a dog's gaze at its owner is innate or learned, and whether the dog's gaze has different functional meanings for humans and conspecifics [22, 7].

### Physiological impacts of pets on Human society:

Although companion animals do not speak our language, they clearly understand and demonstrate an uncanny ability to read human cues and behaviour, accurately interpreting even subtle hand gestures and glances [23]. Pets value the companionship, pleasure, and respond eagerly to care and attention, offering unconditional love and nonthreatening physical contact in holding and petting crucial human needs. An animal-human interactions reduce anxiety, depression, and loneliness as they help enhancing social support and general well-being [24] and increase neurochemicals associated with relaxation and bonding and they improve human immune system functioning [25]. The people who connected strongly with companion animals also have a large capacity for love, empathy, and compassion and attachment to their mothers, siblings, and best friends [24]. Indeed, the presence of a pet is more effective than that of a spouse or friend in ameliorating the cardiovascular effects of stress [27]. A dog significantly reduces blood pressure in a person and a greater chance of survival following a heart attack for a patients with pets [28], reduce dementia, and cancer [24, 29] and ameliorate depression in AIDS patients [30]. Thus, a pet helps to reduce the cost of healthcare.

### Psychosocial effect of pets on Human Society

The women living alone, pets have been associated with increased morale [31] and decreased loneliness [32]. The cats alleviate negative moods equally as well as a human partner, but that only a human partner strengthened positive moods. When an animal is present, people perceive situations as less stressful and are able to react more calmly, which may enhance their psychological well-being [33]. Many doctors' office waiting rooms house aquariums because of their psychological effectiveness in lowering heart rate and blood pressure during stressful situations, such as waiting to undergo surgery [34].

### Pet as a Social Support

The presence of a companion animal lessens fears, despair & isolation and realizes a general sense of well-being in their owners [35] due to their constant availability, non-judgmental support, and unconditional love [36]. Companion animals provide strong social support to the elderly, who often lose human social support because of friends and family moving away or passing away [37]. The

trained dogs may help picking up dropped objects, bring a portable telephone or any other object on command, also help to open doors, operate water taps, electric light switches and press lift buttons to order for those patients who are confined to wheel chairs or are bed ridden. As facilitators of social support between human beings, companion animals act as "social lubricants" [38]. They play an important role in human development and well-being, from childhood throughout the lifespan. On the basis of this assumption, volunteers and professionals have begun to incorporate animals into therapeutic work.

### Pets and Children

Animals play important roles in motivating children and shaping how they view the world [39]. Actually, pets bring out the best in the kids in terms of responsibility, kindness, affection, first-aid, and concern for other living beings. They help developing a deeper respect among members of family for life in general. Pets help prepare children for later life experiences, from pregnancy, birth and rearing of offspring & about the illness. As these activities are often encountered for the first time by children when they live with pets. Children may enjoy increased physical activity as adults when they spend time with animals, especially dogs. Pets increase autonomy, self-concept, and self-esteem in elementary school children [40]. There is more positive feelings about animals and lower levels of fear are seen in children brought up with pets [41] found that the presence of a dog support and promote learning in children in terms of concentration, attention, motivation, and relaxation reflecting reduction of high stress levels which inhibit effective learning and performance.

### Other utility of Pets

The dog's keen senses of smell and hearing make them more effective as Scouting, locating mines, detecting marine mine [42]. The army of various country used the dogs in different ways like, sentry dogs were used to defend camps or other priority areas at night and sometimes during the day. They would bark or growl to alert guards of a stranger's presence. United States deployed 600 Military dogs in the conflicts in Iraq and Afghanistan [43]. The Soviet Union used dogs for anti-tank purposes. In the World War-I, many European communities used dogs to pull small carts for milk deliveries, to carry messages and similar purposes [44]. In the World War II, dogs were the primary animals to test new medicine without risking human lives. The United States' government responded by proclaiming these dogs as heroes. Apart from that SOCOM forces of the US military still use dogs in raids for apprehending fleeing enemies or prisoners, or for searching areas too difficult or dangerous for human soldiers (such as crawl spaces). A police dog, known as a "K-9" performs searching for drugs and explosives at airports, checkpoints, and other places, locating missing people, finding crime scene evidence, and attacking people targeted by the police. Very recently, experiments conducted on dogs to anticipate acute human illness, seizures [45]. Also, dogs have shown a response to human diabetics who were in the early stages of hypoglycaemia [46]. Work is now in progress to identify and reinforce the trait in dogs to help particular individuals with epilepsy.

### Challenges

Despite several benefits from human-animal interactions, companion animals and their owners face struggles. The majority of rental agreements prohibit companion animal ownership. With rising home rentals, pet ownership decreased by 7.3% in Australia and by 1.4% in Germany between 1996 and 2001. And this decline cost about AU \$495 million in increased Australian health expenditure and V367 million in increased German health expenditure [47]. Companion animals are also prohibited in hospitals, nursing homes, and educational institutions. Most elders cannot own pets because of their economic situation or housing constraints [37]. Of the negative aspects of companion animal ownership as it effects human health, there is an important distinction which needs to be made. This is to differentiate between serious health hazard such as communicable disease and injury, which need to be separated from aesthetic offence and nuisance. Although the latter are far less damaging in health terms, they can have a marked effect on the quality of human life. In the United States, a person is 100 times more likely to be seriously injured or killed by a dog than by a venomous snake, and over 85,000

Americans are taken to emergency rooms each year because of falls caused by their pets. Further, people can contract a cornucopia of diseases from companion animals, including brucellosis, roundworm, skin mites, *E. coli*, *salmonella*, *giardia*, ringworms, and cat-scratch fever. And, pets are second only to late-night noise as a source of conflict between neighbours [48].

## Conclusion

Although the field of human animal interactions has grown exponentially in a short time, it is still in its infantile stages. Human-animal interaction research is in great need of carefully controlled, empirical studies that are able to demonstrate concrete, measurable results particularly in India. Animal-assisted interventions have been successful at improving the mental health and quality of life for persons with developmental, neurological, social, and psychological impairments [49]. The study of human animal interactions also bridges many fields, such as psychology, veterinary science, biology, medicine, public policy, sociology, and environmental science. Taken together, the published data have demonstrated impressive and diverse benefits associated with companion animal ownership and animal-assisted interventions. A positive attitude has to be taken to maximize the benefits of companionship with the positive psychological and physiological changes, improved social development, better physical health and the use of assistance animals.

**Application of review:** With sustained efforts to minimize the negative aspects of communicable disease, aesthetic offence, bites, scratches as well as environmental pollution, a satisfactory balance can be achieved to make a significant contribution towards a better quality of life for owners and all who come into contact with their animals.

**Review Category:** Veterinary and Animal Science

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