

1

Animal Behavior: A Key Element in Veterinary Medicine

Understanding animal behavior is important for veterinary professionals, as it helps them recognize abnormal behaviors that may be associated with medical issues including pain, dermatological conditions, gastrointestinal disorders, metabolic diseases, and neurological problems (Camps et al. 2019; Frank 2014; Mills et al. 2020; Seibert and Landsberg 2008; Stelow 2020). Despite the prevalence of behavioral problems in animals, with 85% of dogs and 61% of cats exhibiting such problems, there is a notable gap in veterinary education regarding behavior (Dinwoodie et al. 2019; Sherman and Serpell 2008; Strickler and Shull 2014). Surveys reveal that less than 43% of veterinarians feel they received adequate training in veterinary behavior during their education (Kogan et al. 2020). This lack of preparation is reflected in the fact that the majority of veterinary graduates do not feel ready to handle behavior cases from their first day in practice (Calder et al. 2017).

The availability of specialized training in veterinary behavior is limited, with Calder et al. (2017) noting that less than 40% of veterinary schools employ a Diplomate of the American College of Veterinary Behaviorists (DACVB). Additionally, Shivly et al. (2016) found that 27% of veterinary schools neither require nor offer an elective course in animal behavior. Even among schools that include behavior in their curriculum, 40% of students receive only four days or fewer of behavioral instruction (Calder et al. 2017).

This educational deficiency has considerable implications. Kogan et al. (2020) reported that over 99% of veterinarians encounter behavioral issues in their patients, even when behavior is not the primary concern. Additionally, there is a growing demand in the veterinary job market for graduates with knowledge of animal behavior, but client compliance with referrals to behavioral specialists is often limited by factors like cost and travel distance (Greenfield et al. 2004). This highlights the need for more accessible and comprehensive behavioral education within the general veterinary curriculum.

Some veterinarians may refer cases to various ways. Kogan et al. (2020) found that the majority handle most behavior cases themselves, with about 22% preferring to refer these cases to specialists. Surprisingly, a significant number of veterinarians do not routinely ask clients about behavioral issues, with only about 25% consistently inquiring about such problems (Kogan et al. 2020). Additionally, Patronek and Dodman (1999) found that 15% of veterinarians never inquire at all. Referring cases to trainers or nonveterinary behaviorists in other practices (Siracusa et al. 2017), as observed by Siracusa et al. (2017).

The importance of understanding animal behavior is further highlighted by the fact that over 78% of dogs show signs of fear, anxiety, and stress in veterinary settings, and about 38% of cat

caregivers find the thought of taking their cat to the veterinary hospital stressful (Döring et al. 2009; Volk et al. 2011). Thus, a comprehensive understanding of behavior is essential to manage and treat animals effectively, ensuring the safety and wellbeing of both staff and animals, as well as providing positive experiences for pets and their caregivers.

Proper behavior management is not only about safety but also about creating a positive and humane experience for the animals under care. Animals that are less stressed tend to respond better to treatment, leading to smoother and faster recoveries. This not only improves their interactions with caregivers but also enhances the overall veterinary care experience.

Behavior problems are a primary cause of euthanasia and surrendering of dogs and cats to shelters (Patronek and Dodman 1999; Salman et al. 2000; Scarlett et al. 2002; Seibert and Landsberg 2008). These problems strain the human–animal bond and can significantly impact the relationship between pets and their caregivers. Moreover, behavior problems can complicate a caregiver’s ability to follow medical advice, perform treatments, or administer medications at home.

Prevention of Behavior Problems

Early education is critical in preventing behavior issues in pets. It is essential for prospective pet caregivers to receive guidance that helps them select pets compatible with their lifestyle. This involves understanding the specific needs, temperaments, and care requirements of different breeds or types of pets. Educating caregivers about the importance of prenatal care helps them choose pets with suitable temperaments and prepare for their arrival, thereby reducing the likelihood of future behavioral issues.

Role of the General Practitioner

Veterinarians play a key role in identifying changes in animal behavior, which can often be indicators of underlying health problems. It is critical to learn how to differentiate between normal and abnormal behaviors, which requires consideration of the context, frequency, duration, severity, and sequence of these behaviors. A comprehensive patient evaluation is necessary for an accurate diagnosis, which may include referrals to specialists when complex behavior conditions are suspected.

In emergency scenarios involving acute behavior changes, veterinarians should provide immediate guidance. This includes triaging the situation and advising pet caregivers how to manage these situations, emphasizing the avoidance of punishment and consideration of temporary boarding solutions, if needed, to prevent harm and allow for more objective decision-making (Martin et al. 2014). For nonemergency cases, scheduling ample appointment time is important to thoroughly understand the client’s concerns (Martin et al. 2014). The initial step in managing these cases involves obtaining a detailed history of the pet’s behavior, including when it started, how it has progressed, and what attempts have been made to address the issue, along with the outcomes of these attempts (Martin et al. 2014).

In situations where behavior problems in pets escalate suddenly, leading to an emergency or crisis, the general practitioner should offer immediate assistance. While behavior issues usually develop over time, acute changes can occur, potentially reaching a “breaking point” for caregivers and resulting in an urgent situation. In these cases, the general practitioner’s role is to provide effective triage and assist caregivers in safely navigating the situation.

The practitioner should begin by validating the client's concerns and demonstrating empathy for their experience. Advise the client to avoid known triggers for the pet's behavior and all forms of punishment, both verbal and physical. In some instances temporary boarding might be beneficial, giving the client time to manage the situation more effectively and safely. Once the immediate safety of both the pet and the caregiver is assured, the practitioner should then facilitate a referral to a qualified behavior professional for specialized care and management. This approach ensures that caregivers receive the necessary support and guidance during critical behavior-related emergencies, helping to safely resolve the situation and pave the way for long-term behavioral management.

Common Behavior Problems

Behavior problems are common complaints in veterinary medicine that often indicate an underlying medical problem. These behavior changes are sometimes the first indication to caregivers that something is wrong with their pet. In determining whether a behavior problem has an underlying medical cause, a thorough differential diagnostic list and an in-depth medical workup is needed. A primary diagnosis of a behavioral condition is typically made by exclusion, meaning all potential medical differentials should be thoroughly assessed and eliminated before considering behavioral causes.

One of the most common complaints in both dogs and cats is aggression. Animals may exhibit aggression toward other animals, both familiar and unfamiliar, as well as toward people. It is important to note that aggression can be a normal behavior and does not always indicate an underlying medical or behavioral problem. However, because aggression is a nonspecific sign and can have various causes, the differential diagnosis list is extensive. Gathering a detailed history, including specifics of each aggressive incident, is important for appropriate management and treatment.

Fear, anxiety, and stress are commonly observed in veterinary patients. They occur both at the veterinary hospital and in environments away from the clinic. These problems can hinder access to medical care and often have significant impacts on the lives of both the animal and the client. The clinical signs associated with fear, anxiety, and stress can vary greatly between patients. Effective treatment and management depend on an accurate diagnosis. A complete workup and detailed history help ensure the diagnosis is specific and precise. Videos of the animal in their home environment and when alone are often invaluable and provide many additional details that the caregivers may be unable to offer.

House-soiling is another frequent complaint. This is more often brought up as a concern in cats, but it can occur in dogs as well. Again, a detailed history is highly valuable. This will help to distinguish toileting behavior from urine marking behavior and provides insights into the caregiver's management strategies. Are they appropriately providing for the animal's needs? Perhaps there is not an underlying medical or behavioral problem but rather an environmental issue that can be solved to alter the behavior.

Changes to a behavior pattern can occur at any age but are often noted with aging. Animals facing arthritis, pain, or cognitive decline can present with altered grooming, sleeping, eating, and vocalization behaviors, among others. Bloodwork, radiographs, urinalysis, and full neurologic and orthopedic examinations can provide critical insights into the underlying health of the patient and may reveal endocrine disease, urinary tract infections, seizure disorders, gastrointestinal disease, or musculoskeletal trauma; the differential diagnosis lists for underlying causes of these behavior pattern changes are extensive. Therefore, an exhaustive diagnostic screening panel is key to providing the proper treatment.

Behavior problems can manifest as new behaviors, loss of normal behaviors, or changes in the frequency of behaviors. Treating all underlying health problems is key to addressing medical components and may result in resolution of the behavioral signs. However, some cases are wholly or partially due to psychological causes; in these instances medical treatment alone will not be an effective treatment plan.

Conclusion

Understanding the common behavior complaints caregivers may mention and how to prevent them will help to build and protect the human–animal bond, thus maintaining a good quality of life for both the patient and the client.

References

- Calder, C.D., Albright, J.D., and Koch, C. (2017). Evaluating graduating veterinary students' perception of preparedness in clinical veterinary behavior for "Day-1" of practice and the factors which influence that perception: a questionnaire-based survey. *Journal of Veterinary Behavior* 20: 116–120.
- Camps, T., Amat, M., and Manteca, X. (2019). A review of medical conditions and behavioral problems in dogs and cats. *Animals* 9 (12): 1133.
- Dinwoodie, I.R., Dwyer, B., Zottola, V. et al. (2019). Demographics and comorbidity of behavior problems in dogs. *Journal of Veterinary Behavior* 32: 62–71.
- Döring, D., Roscher, A., Scheipl, F. et al. (2009). Fear-related behaviour of dogs in veterinary practice. *Veterinary Journal* 182 (1): 38–43.
- Frank, D. (2014). Recognizing behavioral signs of pain and disease: a guide for practitioners. *Veterinary Clinics of North America, Small Animal Practice* 44: 507–524.
- Greenfield, C.L., Johnson, A.L., and Schaeffer, D.J. (2004). Frequency of use of various procedures, skills, and areas of knowledge among veterinarians in private small animal exclusive or predominant practice and proficiency expected of new veterinary school graduates. *Journal of the American Veterinary Medical Association* 224 (11): 1780–1787.
- Kogan, L.R., Hellyer, P.W., Rishniw, M., and Schoenfeld-Tacher, R. (2020). Veterinary behavior: assessment of veterinarians' training, experience, and comfort level with cases. *Journal of Veterinary Medical Education* 47 (2): 158–169.
- Martin, K.M., Martin, D., and Shaw, J.K. (2014). Small animal behavioral triage: a guide for practitioners. *Veterinary Clinics of North America, Small Animal Practice* 44: 379–399.
- Mills, D.S., Demontigny-Bédard, I., Gruen, M. et al. (2020). Pain and problem behavior in cats and dogs. *Animals* 10 (2): 318.
- Patronek, G.J. and Dodman, N.H. (1999). Attitudes, procedures, and delivery of behavior services by veterinarians in small animal practice. *Journal of the American Veterinary Medical Association* 215 (11): 1606–1611.
- Salman, M.D., Hutchison, J., Ruch-Gallie, R. et al. (2000). Behavioral reasons for relinquishment of dogs and cats to 12 shelters. *Journal of Applied Animal Welfare Science* 3 (2): 93–106.
- Scarlett, J.M., Salman, M.D., New, J.G., and Kass, P.H. (2002). The role of veterinary practitioners in reducing dog and cat relinquishments and euthanasias. *Journal of the American Veterinary Medical Association* 220 (3): 306–311.

- Seibert, L.M. and Landsberg, G. (2008). Diagnosis and management of patients presenting with behavior problems. *Veterinary Clinics of North America, Small Animal Practice* 38 (5): 937–950.
- Sherman, B.L. and Serpell, J.A. (2008). Training veterinary students in animal behavior to preserve the human-animal bond. *Journal of Veterinary Medical Education* 35 (4): 498–502.
- Shivley, C.B., Garry, F.B., Kogan, L.R., and Grandin, T. (2016). Survey of animal welfare, animal behavior, and animal ethics courses in the curricula of AVMA Council on Education-accredited veterinary colleges and schools. *Journal of the American Veterinary Medical Association* 248 (10): 1165–1170.
- Siracusa, C., Provoost, L., and Reisner, I.R. (2017). Dog- and owner-related risk factors for consideration of euthanasia or rehoming before a referral behavioral consultation and for euthanizing or rehoming the dog after the consultation. *Journal of Veterinary Behavior* 22: 46–56.
- Stelow, E. (2020). Behavior as an illness indicator. *Veterinary Clinics of North America, Small Animal Practice* 50: 695–706.
- Strickler, B.L. and Shull, E.A. (2014). An owner survey of toys, activities, and behavior problems in indoor cats. *Journal of Veterinary Behavior* 9 (5): 207–214.
- Volk, J.O., Felsted, K.O., Thomas, J.G., and Siren, C.W. (2011). Executive summary of the Bayer veterinary care usage study. *Journal of the American Veterinary Medical Association* 238 (10): 1275–1282.