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Abstract

The shelter environment can be extremely stressful for animals. Alleviating stressors will help decrease animals' adverse behaviors, continue their good health and welfare, increase their adoptability, and ensure retention in their adoptive homes. Strategies for alleviating stressors for shelter animals include providing them a sense of control and predictability, teaching them active coping techniques, strengthening the human-animal bond, and reinforcing positive emotions.

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BEHAVIOR

One Welfare Approach: Wellbeing in Shelters

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The relationship between animals and humans has strengthened over thousands of years.¹ Despite the strong bond that often develops between people and their pets, countless dogs and cats worldwide are surrendered to shelters or abandoned each year.^{2,3} The reasons for owners surrendering their companions to shelters vary, including housing unsuitability, cost of care, problem behaviors, and family issues.⁴ However, the most frequently reported reason for relinquishing domestic dogs and cats is behavioral problems.⁵⁻¹³ Commonly cited problem behaviors—such as jumping, excessive digging, or boredom-related problem behaviors—can be managed through training and, alone, are not a reason for euthanasia.¹⁴

An area of focus for most shelters is dogs and cats that display severe behavioral problems (e.g., types of aggression, fear, separation-related issues) because a high number of animals with these problems enter shelters and the shelter

environment often exacerbates the behaviors due to the volatile nature of these animals.¹⁵⁻¹⁹

For dogs and cats that enter a shelter, the environment can be extremely stressful and often results in changed behavior and physiologic responses resulting from social isolation, excess auditory and olfactory stimulation, changes in sleeping patterns, and changes in daily routines.^{15,20-23} Finding strategies to alleviate the effects of these stressors is key to decreasing adverse behaviors and stereotypes, ensuring good health and welfare, increasing adoptability, and safeguarding postadoption retention. Strategies for fulfilling each animal's individual needs include using antecedent control to provide control and predictability within the environment, teaching species-specific active coping techniques, boosting human-animal connectedness through interaction, and reinforcing positive emotional states.^{24,25} This article describes tips for enhancing animals' wellbeing in shelters.

Take-Home Points

- Enhancing an animal's wellbeing in shelters involves meeting its 5 Domain needs: nutrition, physical environment, health, behavioral interactions, and mental state.
- Practical and easy strategies for shelters include implementing antecedent control, teaching coping mechanisms, and future-proofing animal behavior.
- The One Welfare approach connects animal welfare, human wellbeing, and the environment.



ENHANCING WELLBEING IN SHELTERS

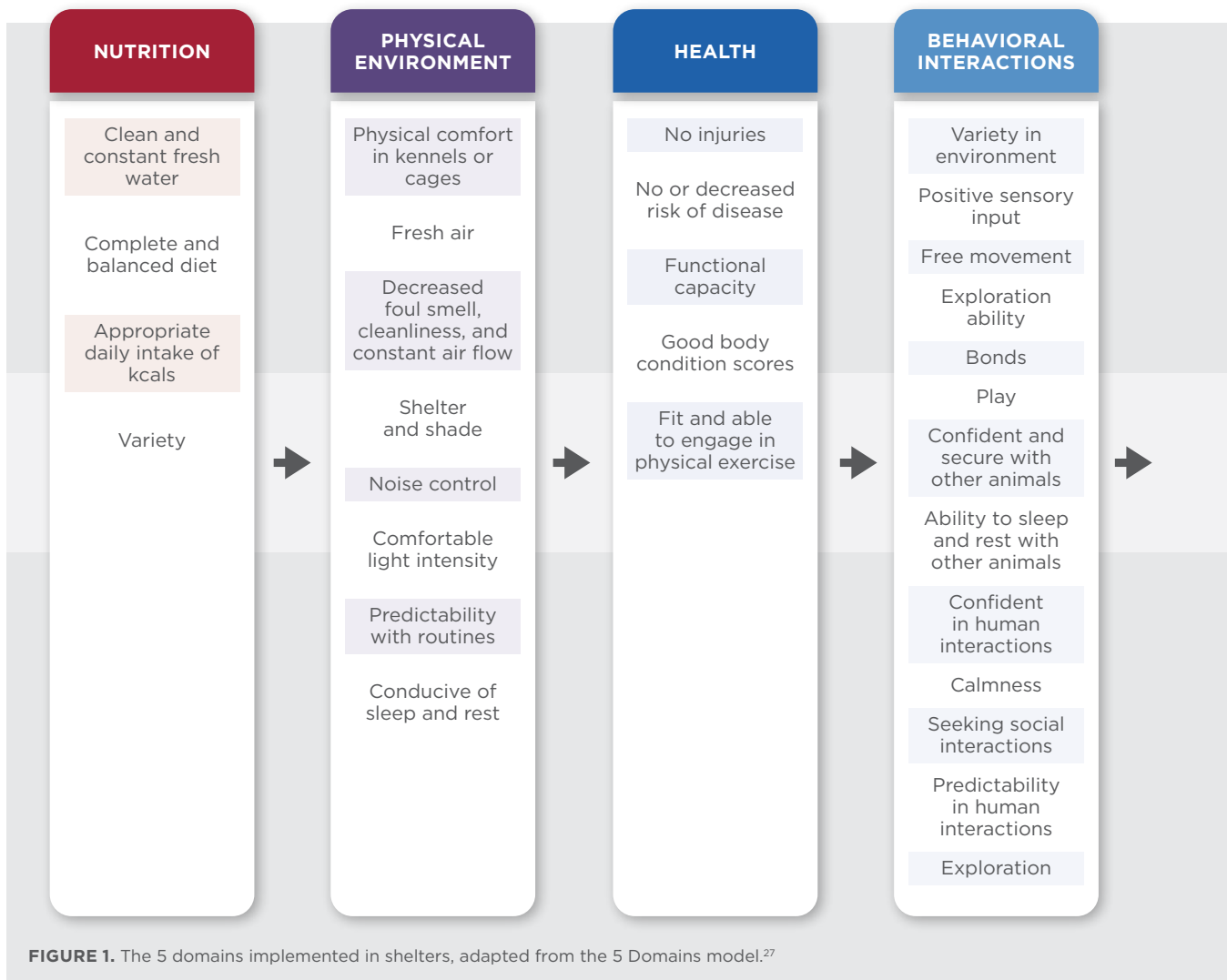
The techniques and strategies available to actively enhance dog and cat in-shelter wellbeing are numerous. Veterinary nurses, as advocates for animals' needs and requirements from entry through adoption, can help implement these strategies in a shelter environment.

Implementing wellbeing strategies requires consideration of the basic needs of each animal, derived from the 5 Domains model for animal welfare assessment.²⁶ The 5 Domains model was originally formulated in 1994 (known as the 5 Freedoms) and subsequently updated over the past 25 years to the current model, which encompasses nutrition, physical environment, health, behavioral interactions, and mental state (**FIGURE 1**).²⁷ Each domain by itself is valuable, and all domains interact and affect each other;

however, the domain to focus on regarding wellbeing in the shelter is that of behavioral interactions. The 3 aspects of behavior are interactions with the environment, humans, and other animals.²⁷

Environment: Creating positive effects in the environment includes providing interesting and pleasant interactions that are varied and novel; adequate recovery after sensory exposure; and the opportunity for the animal to experience choice, movement, and exploration.²⁸⁻³³

Humans: Positive interactions with humans are displayed by calmness, a willingness to interact, relaxation during hands-off and hands-on contact, confidence to explore and interact in novel events, and variable bonding with humans.



Animals: Positive interactions with other animals are displayed by affectionate sociability, combat playfulness, engagement and high stimulation but adequate recovery, predictability, conspecific bonds, and an ability to self-soothe/settle.³⁴⁻³⁶

Positive interactions (e.g., engaged, focused, interested, novel, calm) provide the animal with a level of control and allow displays of rewarding natural behaviors.²⁸⁻³³ Providing opportunities for animals to choose to engage in natural positive interactions affords them a sense of control over their own situation, behaviors, and actions. Enhancing positive emotional motivations, states, and experiences of positive interactions and engagements contributes to overall animal wellbeing.³⁷

BASIC STRATEGIES TO IMPLEMENT IN A SHELTER

Fundamental to shelter success is having strategies that are practical and easy to implement. Such strategies, with staff training and engagement, can be incorporated into everyday routines. Enhancing the behavior of animals in shelters is vital to reducing the manifestation of behavior problems, thereby increasing adoption retention and decreasing return rates. Behavior problems are those that are outside the normal limits of behavior expected from an animal, usually associated with continuous negative emotional motivations under numerous situations, including fear, anxiety, and aggression. In contrast, normal behaviors that are considered undesirable include barking, boisterousness, destructiveness, and inappropriate toileting. Both types may be prevented by enhancing the positive emotional motivations and emotional states of dogs and cats in shelters. Techniques for enhancing behavior include controlling the environment, teaching active coping mechanisms, and “future-proofing.”

- MENTAL STATE**
- Confidence
 - Calmness
 - Comfortable
 - Secure attachment figures
 - Control
 - Predictability
 - Playfulness
 - Affectionate
 - Fulfillment
 - Engagement
 - Positive coping mechanisms
 - Low fear

Managing the Environment

Environmental management is controlling the

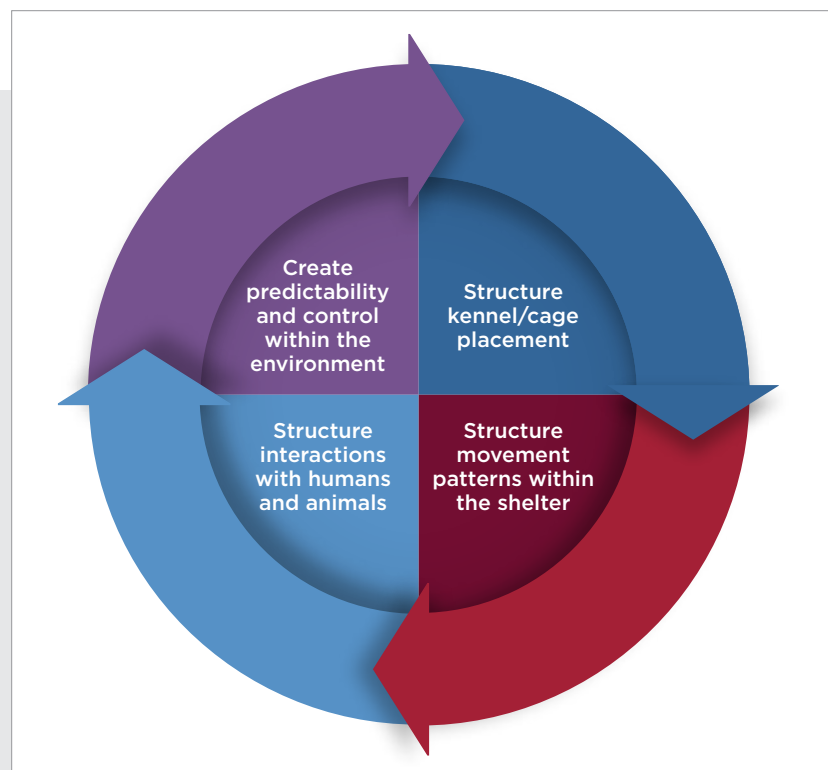


FIGURE 2. Basic strategies for practical application of environmental management in shelters.



environment, routines, or interactions for the animals to create positive experiences. One of the easiest ways to create positive interactions in a shelter is to create predictability and a sense of control for the animals. Predictability enables the animal to engage and disengage when required and to participate in behaviors that are linked to positive experiences associated with memory and goal achievements.

Implementing the following techniques helps reduce excessive movement throughout the facility and prevent sensory overload situations, which often induce fear. In addition, these strategies will create predictable routines and reduce sensory overload, thus allowing adequate recovery and reduced fear and/or anxiety (**FIGURE 2**).

Structure: Initiating a structured kennel/cage location system based on behavior will provide a safe place for animals with certain traits or behaviors.²⁷ For example, housing a frustrated/reactive animal in a cage with low traffic gives that animal less opportunity to practice overt problem behaviors. Similarly, highly fearful dogs or cats can be placed in a low-traffic area (less movement, quiet, and stable natural light) to allow them gradual exposure to sensory information and the ability to explore on their terms.

BOX 1

Tips for Standardized Human Interactions With Shelter Animals

- Conduct all interactions in a positive manner using a patient, empathetic, and caring approach with a calming, clear voice and a gentle and restrained touch.
- Focus all interactions on reward for the animal.
- Conduct all interactions in a safe, controlled environment away from the shelter (e.g., in a controlled room or a mock lounge room with reduced sensory stimulation from the shelter environment).
- Enable animals to feel safe and to experience the human-animal bond by engaging in consensual interactions.
- Allow animals to participate in enjoyable activities (e.g., training, exploring new environments, experiences) and routine activities (e.g., games, enrichment, exercises, walks).

Movement: Limiting movement throughout the shelter will reduce and mitigate any potential negative effects to high-risk animals via antecedent control.²⁷⁻³³

Interactions: Structuring conspecific and intraspecific interactions outside of the kennel with a highly fearful or frustrated/reactive animal will allow controlled interactions on the animal's own terms, thereby shaping positive behaviors.³⁴⁻³⁶ All interactions associated with the shelter should be standardized.²⁵ All employees should be trained in the agreed standardized procedures to avoid conflicting approaches, which unravel animals' wellbeing (**BOX 1**).

Predictability and control: Allow kennels to be safe places. Safe places can be achieved by locating kennels away from sensory stimulation; maintaining routine feeding patterns, walk times, and sleep times; and providing enrichment opportunities (e.g., Kongs, appropriate chew toys, wobblers, cognitive environment, structured play in yards).

Teaching Active Coping Mechanisms

Beyond managing the environment, behavior can also be enhanced by teaching active coping mechanisms. One way to do so is to reinforce positive coping mechanisms (e.g., displacement behaviors, physiological calming responses, environmental engagement, relaxation behaviors). Reinforcing displacement behaviors after the stimulus has occurred can help enhance those behaviors so they naturally occur more frequently later.

An example is a fear-inducing trigger that produces a fixed action pattern in a dog and a conditioned response to move away from the stimulus. After moving away, the dog actively shakes off (any continuous bout of side-to-side movement starting at the head and extending down the body), releasing muscle tension and reducing heart rate, allowing the dog to relax back into a friendly state, thus providing natural reinforcement for the dog. After the shake-off has occurred, a primary reinforcer (e.g., food) and a secondary reinforcer (e.g., "good boy") can be used to enhance the natural reinforcer, which will calm the dog more effectively the next time the animal encounters the triggering stimulus. The naturally occurring behaviors (to reduce physiologic responses and relax muscle contractions) will occur more frequently after the fear-inducing stimulus, if actively reinforced. Over time, the positive active coping mechanisms should be

generalized to different situations in which the dog is under negative stress.

Another technique to train dogs in a way that reduces physiologic arousal is referred to as the “settle.” The settle technique helps the dog reduce its sympathetic arousal under a controlled situation to teach it to be calm. For the settle technique to be effective, shelters need to use a controlled environment away from excessive sensory exposure (e.g., the kennels, high-traffic areas). A training room or yard are ideal spaces that encourage exploration and displacement (normal behaviors displayed out of context), social engagement with humans on their terms, and active reinforcement (**FIGURE 3**). Further, encouraging animals to lie down while actively soothing themselves, often denoted by decreased respiration and heart rate, further assists this behavior modification. Training sessions should run for 15 minutes, once a day. Effectively teaching dogs to settle provides them a mechanism to self-soothe and calm themselves in high-stress situations. The settle technique is critical to wellness in shelters, where dogs are often subjected to overexposure to sensory information, inconsistent routines, excessive handling and interactions, and an unstable environment.

Thus, the key considerations for enhancing positive behavioral states in a shelter include teaching positive

coping mechanisms to dogs and cats in a controlled environment, while simultaneously building trust and influencing the human–animal relationship. Actively reinforcing socially appropriate behaviors promote health, welfare, and wellbeing.

Future-Proofing Behavior

The third step in the wellbeing paradigm is future-proofing each animal’s behavior for successful adoptions and retention in their new homes. Often, adopting out shelter animals is the easy part. Ensuring that adopted animals remain in their new homes can sometimes be challenging, and reasons for return are commonly associated with behavior concerns and problems.⁹ Therefore, shelter animals should be future-proofed as effectively as possible before adoption. Although the goal of training dogs to behave in certain ways is to ensure good health, welfare, and wellbeing in the shelter environment, they are also paramount for adoption success, measured by retention in new homes (**BOX 2**). Future-proofing is done by actively reinforcing positive emotional states and motivations toward humans and other animals.

Future-proofing can be applied to multiple situations by actively reinforcing behaviors that include higher friendliness and sociability with low arousal while interacting with the trainer. Training should start with low-stimulus activities and progress to high-stimulus activities at a rate dependent on the dog’s success with each challenge. To determine low/high stimulus activities, standardized behavior assessment protocols should be used.²⁵ An example of a simple training scenario is teaching appropriate meeting behaviors,

BOX 2

Behaviors Conducive to Adoption Retention

- Appropriate toileting behavior
- Appropriate dog social behavior (i.e., greeting and social play)
- Appropriate use of behavior enrichment activities (e.g., Kongs, chew toys, wobblers, cognitive environment)
- Loose lead walking (under different environmental situations)



FIGURE 3. (A) Controlled training room or (B) yard setup.



Creating standardized programs that enhance not only physical health but also wellness for each individual animal in shelters will ensure that their holistic needs and requirements are met.



such as a natural sit when in front of a human. The key would be to reinforce this behavior by using nonverbal cues or capturing behavior consistently until the dog engages in this behavior without being asked. The benefits are in-shelter wellbeing for the dog and go a long way to impressing future adopters.

After a dog has mastered low-stimulus activity behaviors, challenges can be steadily increased to high-stimulus activities, always in a calm manner. An example would be increasing the physical activity of the dog around the yard (e.g., using fetch, chasing, other play mechanisms that the dog enjoys) and then quickly ceasing play to assess the dog's response. If training is effective, the dog, even in this highly stimulated state, should walk up to the person and automatically sit.

INFLUENCE OF ANIMAL BEHAVIOR WELLBEING ON STAFF, THE SHELTER, AND THE WIDER COMMUNITY

Much has been published about the benefits of human-animal connectedness and the relationships between animals, people, and the environment.³⁸ The health and wellbeing of animals in a shelter environment can have a major influence on shelter employees, volunteers, and the wider community of people who enter the shelter.

One Health is a collaborative, multisectional, and transdisciplinary approach to optimizing health outcomes of animals, humans, and their shared environments.³⁹ Derived from a medical/veterinary health standpoint, the One Health concept describes animal and human health as being interdependent and bound to the health of the environment in which they exist.³⁹ However, the One Welfare approach extends wider than One Health in that it serves to highlight the

interconnectedness between animal welfare, human welfare, and the environment.³⁸ One Welfare takes into account wellbeing; future sustainability of health and wellbeing for animals, humans, and the environment; and therefore the quality of life of humans and animals.

Applying the One Welfare approach when implementing a wellbeing paradigm in the shelter environment is critical. Creating standardized programs that enhance not only physical health but also wellness for each individual animal in shelters will ensure that their holistic needs and requirements are met. In turn, outcomes for not only the animals but for employees and the wider community are positive: human-animal bonds are facilitated and nurtured and a sense of control within the human-animal-environment triad is elicited. Ensuring wellbeing in our canine and feline companions creates a sense of fulfillment, joy, happiness, and positive wellbeing.

SUMMARY

A wide range of strategies can be implemented in the shelter environment to increase the wellbeing of dogs and cats. The key focus for veterinary nurses is to actively enhance wellbeing by using a One Welfare approach to fulfill the animals' needs according to the 5 Domains model. That approach includes creating a positive, safe environment; enhancing animal behavior by teaching positive behaviors; and capitalizing on positive coping mechanisms, which could contribute to animal wellbeing, increased adoptions, and greater postadoption retention. Furthermore, the One Welfare approach can positively influence the physical and psychological wellbeing of shelter employees and volunteers. **TVN**

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