UNDERSTANDING WHAT DOGS TRULY NEED: A SCIENTIFIC APPROACH Griffin et al. 2023

Key message:

Dogs' well-being goes beyond basic needs like food and shelter—they also require social interaction, emotional security, and mental stimulation. The Hierarchy of Dogs' Needs, adapted from Maslow's model, provides a science-based framework to better understand and meet these needs. Applying these insights helps dog owners and professionals ensure that dogs not only survive but live fulfilling, healthy, and well-balanced lives in various environments.

Highlights:

Dogs have layered needs beyond survival – Their well-being depends not only on food, water, and shelter but also on emotional, social, and cognitive fulfillment.

Every dog is unique – Breed, age, health, and personality all influence individual needs, meaning care should be tailored rather than one-size-fits-all.

A structured, science-based approach helps identify and meet needs – The hierarchy of dogs' needs provides a clear framework to understand and improve their quality of life.

Mental stimulation is crucial – Engaging a dog's mind through enrichment activities, training, and problem-solving opportunities is just as important as physical exercise.

This framework applies to all dogs – Whether in a family home, a shelter, or a working environment, recognizing and addressing needs at different levels can enhance a dog's overall well-being.

Text body:

What does it really take to ensure a dog's happiness and well-being? Dogs have a range of needs—some shaped by their biology as a carnivorous species, others influenced by their breed or mix of breeds, and some unique to their individual personalities.

As dog owners, professionals, and dog lovers, we often assume we know what our canine companions need: food, water, exercise, and a comfy bed. It is easy to recognize these basic needs. But what if fulfilling a dog's quality of life goes far beyond these basics? Dogs' needs aren't just about survival; they also include emotional and mental well-being. Providing a truly good quality of life for dogs goes beyond just meeting their physical requirements. For those living or working closely with dogs, understanding their needs may feel intuitive. However, our perceptions are often shaped by human assumptions rather than the dog's actual experiences.

This is where science can help. A study by Griffin et al. (2023) offers a structured approach to understanding canine needs by adapting Maslow's famous Hierarchy of Needs—a psychological model originally designed for humans. This framework highlights that dogs, like humans, have layered needs that extend beyond survival to include emotional and social well-being. By using this model, we can gain deeper insights into what truly contributes to a dog's happiness and overall quality of life.

Why understanding dogs' needs requires a systematic approach

Ensuring a dog's well-being starts with accurately recognizing their needs—a task often complicated by human tendencies to anthropomorphize. Anthropomorphism means to project human emotions, motivations, mental states, or abilities to animal. While this can help us relate to them, it also carries the risk of misunderstanding and misinterpreting their actual needs. Caregivers may unintentionally prioritize what feels beneficial to them—or to humans in general—rather than addressing the dog's real needs. These misinterpretations of canine behaviour and needs can lead to unintended negative consequences for their welfare, especially in resource-limited settings such as shelters or rehoming situations.

Meeting dogs' needs requires a careful balance between universal requirements—those shared by all dogs—and those for the specific individual dog, shaped by factors such as age, breed, and health, which introduce unique variations. While all dogs need exercise, for example, the type and intensity can

differ significantly between a high-energy Border Collie and a senior Dachshund. Recognizing these nuances is important for promoting better welfare. However, it can be challenging to be aware of these differences and especially how to prioritize them, which can result in gaps in how needs are met.

A scientifically grounded approach can help overcoming these challenges by shifting the focus away from human-centred assumptions and toward recognizing the species-specific nature of dogs. Instead of seeing dogs through a human lens, this approach emphasizes their unique biological, emotional, and social needs.

Griffin and colleagues (2023) addressed this challenge by adapting Maslow's Hierarchy of Needs, framework that explains how human needs are structured. Maslow organised human needs into a pyramid, starting with basic survival necessities like food and shelter and building up to higher-level needs such as emotional well-being and personal fulfillment. Griffin and colleagues aimed to create a similar framework for dogs, also organising their needs in a step-by-step structure into different levels—from essential physical needs to emotional and mental well-being. This approach helps us move beyond human-centred assumptions and provides a clear, science-based way for understanding and addressing dogs' needs in various contexts, from family homes to shelters.

How the hierarchy of dogs' needs was created

Creating the hierarchy of dogs' needs was a thoughtful and detailed process, carried out in three major steps. The goal was to create a complete and science-based framework that captures and comprehensively as possible what dogs truly need to live healthy and fulfilling lives. The researchers combined evidence from scientific studies with expert insights to ensure that the model covered the physical, emotional, and social aspects of dog welfare.

Step 1: Diving into the science

The researchers began with an extensive search of scientific studies on dog behaviour, welfare, and veterinary care. They identified 37 specific needs that contribute to a dog's quality of life—ranging from basic survival like food and water to safety and shelter to more complex needs such as social interaction and mental stimulation.

However, this wasn't a one-and-done process. As they reviewed more studies, they refined and expanded the list, making sure no critical needs were overlooked. The goal was to create a complete and evidence-based understanding of what dogs require for living a good life.

Step 2: Organising dogs' needs like Maslow did for humans

Once they had a solid list of needs, the researchers grouped them into broader categories and atsuctured them into five hierarchical levels, inspired by Maslow's

pyramid. Just as Maslow categorized human needs from basic survival to higher emotional and cognitive aspirations, the team aimed to do the same for canine needs. Their framework included for example p**hysiological needs** (focussing on basics necessary for survival, such as consistent access to food, clean water, and appropriate places to rest or relieve themselves, which form the foundation of any dog's quality of life), s**afety needs** (highlighting the importance of stability and protection, such as secure environments and predictable routines to feel safe and reduce stress), and **social needs** (emphasizing the critical role of connection and interaction, reflecting the importance of bonding with humans and other dogs for emotional support).

Step 3: Expert input to refine the framework

To ensure the framework was both scientifically robust and practical in real-world scenarios, the researchers then asked for input from 14 experts. This expert group included veterinarians, dog behaviourists, and shelter professionals, each bringing a unique perspective to the table.

The experts reviewed the framework over multiple rounds using the Delphi method, a structured approach that gathers opinions from specialists, fine-tune ideas through discussion, and works toward a shared agreement. This step helped clarify which needs belonged at each level of the hierarchy and ensured that the model was both scientifically accurate and applicable to different dog populations—from pets in family homes to dogs in shelters.

The final framework: The hierarchy of dogs' needs

The final result of this study is a framework covering 42 specific needs of dogs, organised into five hierarchical levels: 1. Physiological needs, 2. Safety needs, 3. Social needs, 4. Integrity needs, and 5. Cognitive needs.

Each need level is classified as either **mandatory** (needs that are essential for ensuring a minimum acceptable quality of life) or **preferred** (needs that enhance well-being, allowing dogs not just to survive, but to thrive).

This hierarchy of dogs' needs mirrors Maslow's model for humans, but adapts it to the unique requirements of dogs. It starts with the most fundamental survival needs at the base on which more advanced, higher-level needs are built that contribute to emotional and cognitive fulfilment at the top. Below is a more detailed overview of each level, with examples of what each level includes (see the full pyramid developed by Griffin and colleagues in Fig. 1).

1. Physiological needs (Mandatory)

At the foundation of the hierarchy are physiological needs, the absolute essentials for a dog's survival and physical health. These include:

- **Access to water and food** to ensure proper nutrition and hydration.

- **Regular physical exercise** to maintain health and prevent obesity.
- **Shelter or housing** that provides protection against weather and comfort.
- **Veterinary care**, including treatments for injuries, diseases, and palliative care for end-of-life stages.
- **Undisturbed rest** in a suitable, quiet, comfortable space to support recovery and relaxation.

These fundamental needs form the basic building blocks of a dog's well-being and quality of life, ensuring they are healthy and comfortable.

2. Safety needs (Mandatory)

The second level focuses on creating a secure, stable, and predictable environment, which is crucial for reducing stress and promoting well-being. Examples include:

- **A sense of safety and agency/control**, allowing dogs to make choices and feel secure in their environment.
- **Consistent access to appropriate toileting areas** to meet their natural needs.
- **Preventative veterinary care** to detect and address potential health issues before they arise.
- **Proper grooming and maintenance** to support hygiene and comfort, particularly in cases where auto-grooming is insufficient and dogs require human assistance.
- **Clean living environments and suitable bedding** tailored to the dog's age, size, and specific needs.

By fulfilling these safety needs, we ensure dogs can navigate their world with confidence and minimal stress.

3. Social needs (Mandatory)

As highly social animals, meaningful social connections are critical for dogs. At this level, the hierarchy emphasizes the importance of:

- **Regular interaction and relationships** with both humans and other dogs.
- **Prevention of loneliness and isolation**, which can lead to behavioural issues and poor mental health.

Dogs thrive on companionship and social connections, making this level essential for fostering emotional stability.

4. Integrity needs (Preferred)

Integrity needs go beyond survival to address emotional resilience and behavioural stability. These are categorized as preferred needs, aimed at helping dogs adjust and flourish in their environments. They include:

- **Positive, non-punitive training** to build trust and strengthen the human-dog bond.
- **Behavioural support and guidance** to help dogs cope with challenges and adapt to their surroundings.

These needs focus on creating an emotionally secure and balanced life for dogs.

5. Cognitive needs (Preferred)

At the top of the hierarchy are cognitive needs, which are vital for a dog's psychological well-being. These preferred needs include providing mental stimulation and opportunities for problem-solving, exploration, and learning. Meeting these needs enables dogs to reach their full potential and experience enriched lives.

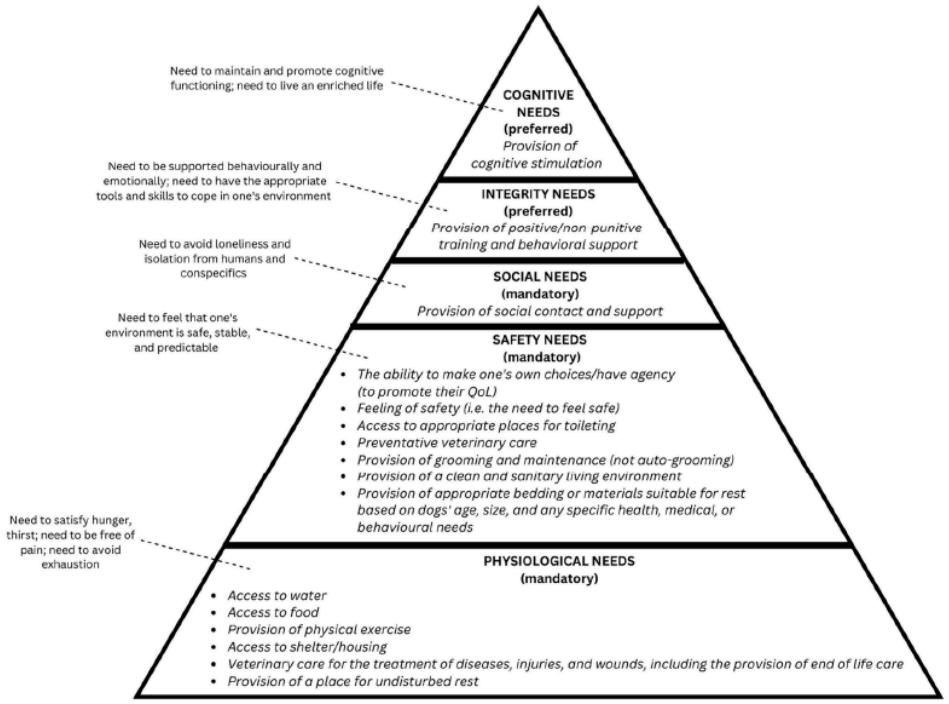

Figure 1. Illustration of the hierarchy of dogs' needs as developed by Griffin and colleagues, including need levels, groups, and their descriptions and importance ranking (image from Griffin et al. 2023).

Why this framework matters

The hierarchy of dogs' needs is more than a theoretical model or checklist —it has the potential to transform how we understand and meet dogs' diverse needs. By grounding the framework on scientific evidence, it helps shift the focus from human assumptions to dogs' actual needs and provides a structured, holistic approach to recognizing dogs' needs and improving their welfare.

Balancing survival and fulfillment

At its core, the model aims to address two key aspects:

1. **Universal needs:** Needs shared by all dogs, like access to food, safety, and social interaction.
2. **Individual needs:** Tailored requirements based on a dog's breed, age, health, or living environment.

This balance ensures that the framework accounts for both species-wide needs and needs of each individual, making it applicable to every dog, whether they are family pets, working dogs, or shelter animals, recognizing their distinct needs.

Challenges in prioritization

One of the more complex aspects of developing the hierarchy for the researchers was determining how to prioritize needs for different groups of dogs, such as seniors, working dogs, or those in shelters. While the experts generally agreed on the core needs, their opinions varied on whether certain needs should be emphasized more for specific groups. For instance whether all senior dogs share the same needs or prioritization should occur on an individual basis?

These discussions show that dogs are a diverse species with different needs, making further research important. Future versions of the hierarchy, especially as an assessment tool, will revisit these questions to make it even more accurate and useful.

From shelters to homes: A flexible approach

While this framework was originally designed to assess the quality of life of dogs in shelters and rehoming contexts, its flexibility makes it valuable across many different settings. It can help improve the lives of pet dogs in family homes, working dogs in professional roles such as guide dogs or police dogs, and free-roaming dogs in urban or rural areas.

By focusing on whether needs are fulfilled rather than prescribing how they should be met, the framework is adaptable to diverse settings and lifestyles. For example, a pet dog might receive cognitive stimulation through structured training, while a free-roaming dog may satisfy the same need by foraging and exploring the environment.

Looking ahead

The current framework is part of a broader project of Griffin and colleagues to develop a practical assessment tool for assessing dogs' quality of life. The goal is to help caregivers, shelter workers, and veterinarians systematically evaluate whether a dog's needs are being met. Future updates are planned to incorporate data collected from real-world situations, ensuring the pyramid of dog needs evolves to address emerging insights and challenges.

Science into practice

How you can apply these insights in everyday life

This framework isn't just a theoretical model—it provides valuable insights that can be applied to everyday life with dogs. By understanding the different layers of a dog's needs, we can translate these findings into practical steps to improve their well-being. Whether you're a pet owner, a shelter worker, or a dog professional like a trainer or veterinarian, these insights help assess and meet dogs' needs in a structured way. By applying them, you can ensure that the dogs in your care aren't just surviving, but truly thriving.

- **Recognize the layers of needs:** Providing food, water, and shelter is essential, but dogs also need social interaction, mental stimulation, and a sense of safety. Ask yourself: Does my dog have regular opportunities to bond with me or others? Am I offering activities that keep their mind engaged? Small changes—like adding interactive play or training exercises—can significantly enhance their well-being.
- **Tailor care to your individual dog:** No two dogs are the same. Consider their age, breed, health, and personality when designing their routine. A high-energy breed like a Border Collie will need plenty of physical and mental stimulation, while an older dog might benefit more from gentle enrichment activities, like sniffing games or puzzle toys. Think about what makes your dog feel happy and secure and adjust accordingly.
- **Go beyond survival—engage their mind:** Mental stimulation is very important. Simple activities like using puzzle feeders, teaching new tricks, or letting your dog explore different environments can help meet their cognitive needs. Try introducing a "new experience" each week—whether it's a new walking route, a sniffing game, or a training challenge.
- **Use the framework to assess your dog's well-being:** If you are unsure whether your dog's needs are being met, our free assessment tool based on this study can help. It offers practical steps to evaluate your dog's needs and find areas where you can improve. You can download it below and start using it today!

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