Animal Behavioral Interventions: Validated Versus "Science-based" Procedures

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Learning Goals:

- Understand which animal behavior protocols are scientifically validated or at least supported by existing literature
- Identify gaps in the behavioral literature, including areas where animal behavior practitioners may be ahead of the research
- Describe areas where efficacy and ethics collide (e.g., the use of or negative reinforcement as potentially effective methodologies)

Description: Behavior problems are common in companion animals, yet relatively few behavior intervention protocols have been validated for this population. Further, even fewer studies have packaged validated protocols for public consumption or assessed the incorporation of owners as implementers. This presentation will cover recent research on animal behavior interventions and procedures, including protocols to address behavior problems, skill acquisition, and assessment procedures. In addition, validated procedures incorporating components with ethical implications will be discussed.

What is scientific validation

Validation can be a subjective experience! Generally, validation in the scientific community requires empirically testing formalized, technical methods and then publishing those methods in a peer-reviewed journal. Validation generally requires that the methods were efficacious, the measurements were both accurate and precise, and the intervention had both integrity and social validity. We'll discuss what all of these terms mean and how they apply to currently published studies.

What species have published behavioral protocols?

Very few species have validated behavioral protocols, and a lot more research is needed in companion animals. It's both disappointing but also inspiring as a researcher!

Which protocols have been validated or at least tested? What is left to validate or test? And what to do if a protocol hasn't been directly validated?

A small handful of behavioral intervention protocols have been formally tested, validated, and published in the peer-reviewed literature including treatments for dogs: jumping (Pfaller-Sadovsky et al., 2019), mouthing (Waite & Kodak, 2021), food guarding (Mehrkam et al., 2020), aggression (Echterling-Savage, 2010; Winslow et al., 2018), ear cleaning (Waite & Kodak, under review), separation anxiety (Feuerbacher & Muir, 2020), stereotypies (Hall et al., 2015), barking (Protopopova et al., 2016), and leash pulling (Winslow et al., 2018). Interventions for cats have been limited to focusing on aggression (Fritz et al., 2022; Guzman, 2022). We will discuss several of these studies and their results (or lack thereof). Further, there are lots of opportunities to extrapolate from protocols which are validated but not exactly what we're looking for, and we will discuss how that can be done.

Interestingly, practitioners in the animal behavior field are often far ahead of the literature. We'll discuss why this may be and offer suggestions for which protocols are especially intriguing and should be further studied.

What would you like to see tested?
There may be a little bit of time left open to the audience to think about what they feel is low-hanging fruit or critically important to test in terms of behavioral interventions. This can result in a discussion between audience and presenter of where researchers (and their partners in the clinical or applied spaces) should focus their efforts.

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