Environmental Enrichment Choices of Shelter Cats (Felis catus): A Review

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Introduction
This study examined the types of enrichment most-preferred by shelter cats (Felis catus) (Linnaeus, 1758 cited in Tavares et al., 2016), by conducting a choice test in a controlled environment (Ellis et al., 2017). The paper introduces the subject well and explains its importance by providing background information (Pyrczak & Tcherni-Buzzeo, 2018) on the stresses that shelter cats may face. Information on how the current study will advance knowledge in the area is discussed (Kumar, 2014), referencing relevant literature throughout (Davidson & Delbridge, 2011). It is written in a clear way that allows the reader to understand the justification for conducting the research (Borràs, 2017) and their goal of investigating how shelter cats allocate their time between the three main types of recommended environmental enrichment: hiding opportunities, elevated perching opportunities, and toys (Ellis et al., 2017).

Methods
The researchers provided sufficient and specific details: times, lighting, temperature, dimensions for the enclosure design, brands for enrichment items, and recording techniques, allowing the study to be easily repeatable (Davidson & Delbridge, 2011). Figure 1 shows a breakdown of the method that was used to help determine the most effective enrichment for shelter cats.

Results
The study found that the hiding compartment (BOX) was used most (Fig. 3). The use of the perching option (SHELF) varied between choice chambers; used more often in chamber 3. Most frequent compartments changes occurred between the hours of 08:00 and 12:00. The results would have been easier to interpret if multiple graphs and axis labels were used.

Discussion
During the study, human activity was concentrated around 11:00 and 12:00; this correlates with the recorded increase in movement. Furthermore, the chamber 3 shelf was directly facing the human activity area, possibly indicating a desire for interaction (Ellis et al., 2017). The amount of time spent in the box compartment could demonstrate hiding behaviour, a key indicator of cat stress (Stella & Coney, 2016), or, if they were choosing to sleep in the box, a reflection of their activity. The sample size of the study was small, therefore not able to accurately represent the entire population of shelter cats (Pyrczak & Tcherni-Buzzeo, 2018). Using a larger sample, with a balance of stray and surrendered cats, from multiple shelters (Fig. 4), even when presented concurrently with other enrichment choices.

Conclusion
Large numbers of cats, that are reliant on humans for their care, are kept in homes and shelters each year. Investigating how an indoor lifestyle can affect cat behavior and understanding how to provide them the highest quality environment to live in could help to improve the outcomes of shelter adoptions, as well as overall cat welfare. Although this study was done on a relatively small scale, it provides important research on how to most effectively enrich cat housing. The results discovered in this study help evidence that hiding boxes are a valued resource for shelter cats (Fig. 4), even when presented concurrently with other enrichment choices.

References