Investigating the effect of age, sex, breed and health on the length of stay of dogs in a UK rescue shelter

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Objectives

The amount of time an animal remains at a shelter is termed the 'length of stay' (LOS). This is an important statistic for measuring shelter performance as a longer LOS indicates less efficient protocols for adoption promotion. As well as variance between shelters, LOS also differs between animals depending on many different factors. The aim of this study was to identify which traits of shelter dogs cause them to have an altered LOS.

Introduction

Rescue shelters provide temporary residence for dogs that are stray or have been relinquished by their owner. An animals LOS is directly dependent on their desirability to adopters. Existing literature shows that age and LOS are positively correlated, meaning as age increases LOS increases. Varied information regarding the relationship between sex and LOS has been published in different studies. It has been reported that there is a significant difference in LOS between breeds. There has been very little research into how health status affects LOS.

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Methods and Materials

Dogs rehomed from the shelter between August 2018 and December 2019 were included (n=263). The effect of age, breed, sex and health on their LOS was analysed from adoption records. Independent sample median tests were carried out using SPSS® statistics (SPSS v26, IBM corp). Significance was set at $p<0.05$.

Results

Sex did not significantly affect the LOS as shown in figure 3 and Staffordshire bull terriers did not have a significantly different LOS to other breeds as shown in figure 4. Puppies had the shortest LOS of all ages ($p=0.04$) as shown in figure 2. The most common health problems of adopted dogs were dermatological conditions (20/115, 17%) followed by lameness (16/115, 14%). Healthy dogs had a significantly shorter LOS than dogs with any health condition (34 compared to 44 days, $p=0.004$). The median LOS for dogs with each health problem can be seen in figure 1.

Figure 1: A graph to show the median LOS for each health category of adopted dogs

Conclusions and Clinical significance

These findings contrast with variable results in existing literature and therefore the interactions between these factors and length of stay are best assessed at shelter level, rather than on wider scales. Once trends in adopter preferences have been discovered for each individual shelter, they can focus their resources to increase rehoming rates in under-adopted groups.

Figure 2: A graph to show the distribution of LOS for each age category for adopted dogs.

Figure 3: A graph to show the distribution of LOS for each sex of adopted dogs.

Figure 4: A graph to show the distribution of LOS for each breed category of adopted dogs

Discussion

Puppies had a shorter LOS than adults, and adults had a shorter LOS than seniors, respectively ($p<0.05$). Adopters may be deterred from rehoming senior dogs due to the increased risk of health problems and the cost of veterinary care associated with this.

The median LOS for bitches and dogs was similar ($p>0.05$) which may indicate that adopters have no preferred sex.

SBTs had a longer median LOS than non SBTs, however this difference was not significant ($p>0.05$). Due to incoherent breed categorisations one must be cautious when making comparative assumptions between these results and that of existing literature.

Healthy dogs had a significantly shorter LOS than dogs with any health problems ($p<0.05$). This may be because dogs with medical problems remained in the shelter for treatment or that they were less attractive to adopters because of the financial requirements of veterinary care.

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