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Effect of Declaw Bans on Shelter Cat Populations

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Impacts of Declaw Bans on Shelter Cat Populations

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Abstract

Growing concern over animal welfare has led to new policies that ban declaw procedures on cats. In the United States, several cities have instituted bans, including Denver, Colorado. This study examines whether the ban has resulted in changed euthanasia rates and adoption rates in an animal shelter system. Data on euthanasia rates and adoption rates were gathered for thirteen years prior to the ban and for five years following implementation. The euthanasia rate was found to have decreased while the adoption rate increased. Several possible explanations are explored and a recommendation for public policy is given.

Background

Declawing has been a controversial surgery for years, as evidenced by the numerous bans in cities, states, and countries across the world. Proponents for the banning of declawing argue the procedure leads to pain and furthers adverse behaviors (Kafer). However, this hasn't prevented about one-quarter of cats in the United States from being declawed (Welfare). Those who argue for the procedure claim that it helps prevent property damage and injury to humans or other cats (Patronek).

There are two methods of declawing cats. The first is a tendonectomy, a severing of the deep digital flexor tendon, and the second is an onychectomy, removal of the distal phalanx (P3) bone. The onychectomy procedure can be performed in several ways. The P3 can be disarticulated by a scalpel or laser and then partially cut with guillotine nail clippers. This procedure leaves the articular base with the deep digital flexor tendon attached. The P3 can also be removed solely by the use of a scalpel or surgical laser. Previously, it was common practice to retain part of the P3 bone, however, recently the standard practice is to remove the entirety of this bone and sever the deep digital flexor tendon (Martell-Moran). The prevention of property damage is the most common reason for cats to undergo tendonectomy or onychectomy (Yeon). Behavior issues, on the other hand, are the main reason for euthanasia (Grier). In fact, roughly half of cat owners in Ontario, Canada would have relinquished their cat had it not been declawed (Welfare).

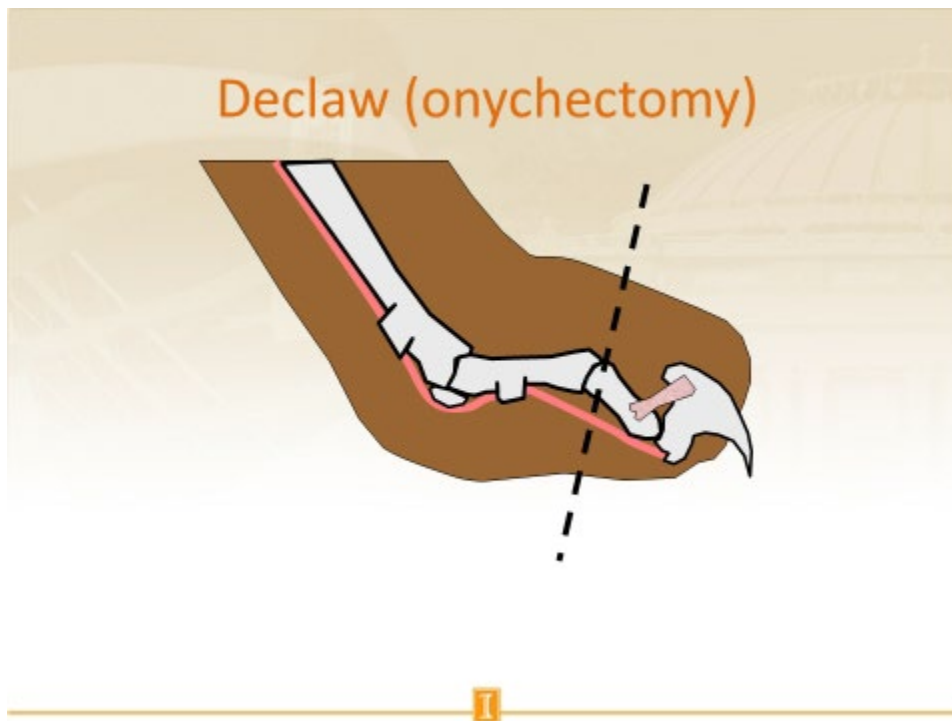


Fig. 1. Diagram showing where an onychectomy is performed.

Onychectomies have been a common practice among veterinary professionals since 1973. The procedure removes the last bone (P3) of each finger and therefore removes the cat's claws. This prevents the cat from being able to engage in natural behaviors that can have destructive results,

such as scratching furniture. Recently, there has been increasing debate over the morality of the practice. Some research has demonstrated that even some veterinary staff feel uncomfortable helping with the procedure (Atwood-Harvey). Those claiming the practice is immoral argue the procedure is an elective procedure that leaves cats amputees and open to chronic pain, muscle weakening, arthritis, stress, depression, and litterbox avoidance (Fritscher). Several cities, mostly in California, were the model for state-wide bans on the procedure. New York and Maryland have all passed bans on onychectomy, while it has been proposed in New Jersey, Florida, and Massachusetts.

The impacts of declawing on cat behavior depend largely on the quality of their onychectomy procedure. If the procedure leaves fragments of the P3 bone, there is an increased chance of adverse behavior developing in the cat. Unfortunately, 63% of declawed cats have remaining P3 fragments, leading to an amplified probability of behaviors such as biting, house soiling, and excessive grooming (barbering) (Martell-Moran). The reason for the increase in destructive behaviors is not known; however, it is hypothesized the cause may be due to pain or frustration at the inability to use their claws (Fritscher). This hypothesis is difficult to test as pain and frustration are difficult variables to quantify (Martell-Moran). Alternatively, the increase in destructive behavior could be due to back pain caused by the onychectomy. The procedure may force the cat to alter its stance which can lead to joint pain. Cats with fully removed P3 bones also were forced to start walking on the soft cartilage around their P2 bone, which can lead to surface sensitivity and pain. Cats who had the entirety of their P3 bone removed had little chance of developing barbering but still had a slightly increased chance of developing house soiling and biting behaviors. The increased frequency of biting leads to a higher chance of infection in the person bitten, as anywhere from 30-50% of cat bites become infected (Martell-Moran). Surveys of owners of declawed cats showed that a higher number of declawed cats jumped on counters or tables. This, along with meowing, was even higher in single-cat households and both of these behaviors are frequently viewed as problematic by cat owners (Morgan).

The effects of an onychectomy on the remaining P2 bones and cartilage are not well known. The cat walking on the cartilaginous ends of the P2 bones could cause bone remodeling where the P2 bone changes shape to better support the cat's weight. This could be the basis of adverse behaviors, such as fecal and urinary elimination outside of the litter box, as the gravel-like litter may cause paw pain. Additionally, if the cat is experiencing paw pain, biting and aggression may be a reaction to this pain or the expectation of pain resulting from being touched (Martell-Moran).

Up to 13% percent of cats experienced postoperative pain after twelve days and this may be dependent on the amount of P3 bone that was removed (Welfare). Immediate postoperative complications are more likely to occur when a scalpel blade was used instead of a guillotine nail trimmer, however, the use of guillotine nail trimmers was associated with a higher chance of later-onset complications. Complications range from hemorrhage, claw regrowth, wound dehiscence, paralysis, and distal limb ischemia, to disease from reduced immune function due to pain. Hemorrhaging, or bleeding from the incision sites, was the most common complication. Wound dehiscence, or separation of the two edges of the incision site, was the second most

common complication and was most frequently seen when a scalpel was used for disarticulation. This is due to increased surgical time, greater soft tissue dissection, and different tissue handling techniques (Welfare).

An examination of the effects of a declawing ban in British Columbia shows the ban did not lead to an increase in the number of cats surrendered for destructive biting behavior nor an increase in length of stay or live release rate. Interestingly, a decrease in owner-requested euthanasia took place after the ban (Ellis). Since animal shelters serve as an important link in the recovery and adoption process, the ability of potential adopters to declaw their new cat may impact the retention and adoption rates of cats within shelter systems.

Therefore, this study seeks to determine if the trend of decreased euthanasia rates of cats in shelters will be repeated in the United States. However, I hypothesize that in the United States, euthanasia rates and adoption rates will increase following the declaw bans due to the inability to prevent destructive behaviors via declawing.

Methods

The city under examination is Denver, Colorado, which implemented a declaw ban in 2017. Originally, nine cities with declaw bans were selected for examination, and all but one (Denver, CO) were in California. Due to a lack of interest in participation, only the Denver Animal Shelter will be examined. The shelter is government-backed. Data was gathered for the years 2004-2022.

Statistical Analysis

A chi-square test was performed to compare the frequency of euthanasia and the number of successful adoptions before and after the declaw ban was implemented. The year the declaw ban was implemented was removed from the data, as the ban was implemented partway through the year. The city serves as its own control, comparing before and after the ban was implemented. Significance was determined at $\alpha = 0.05$.

Results

In Denver, the average number of cats in the shelter after the ban was implemented went down 30.9%, from an average of 1139 every year to 787 cats per year. The number of adoptions went up, and the rate of euthanasia went down ($X^2 = 1201.77$, p-value < 0.001). This demonstrates a statistically significant difference before and after the ban was implemented.

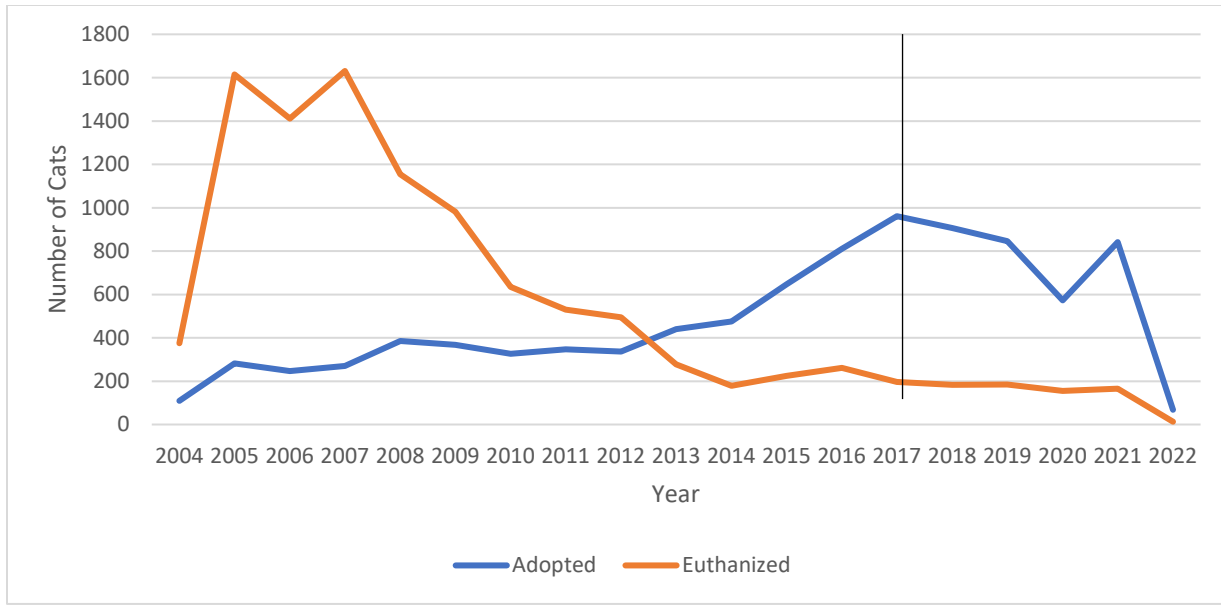


Fig. 2. The number of cats adopted and euthanized in Denver every year since 2004 with line to mark when declaw ban started; Pollins, Stevie K. “Denver Animal Shelter Cat Populations.” Department of Public Health, 3 Mar. 2022.

Discussion

The increased number of adoptions may be due to the increased publicity of cats in need of adoption that resulted from debate regarding the ban. In addition, the recent COVID-19 pandemic has resulted in a spike in pet adoptions: approximately one in five households adopted a cat or dog at the beginning of the pandemic, and 85-90% of those with a pet are not planning on rehoming their animal in the near future (NEW). Furthermore, the growing market of pet toys and supplies has provided more options for cat owners to redirect scratching behavior to appropriate places. There has also been an increased demand for animal behaviorists and pet psychologists that can decrease inappropriate scratching behavior. This is due to heightened awareness of these professions because of television series following the methods of animal behaviorists (Job).

The higher number of adoptions is likely the reason for the decreased euthanasia rate as fewer cats are staying in the shelter system. Organizations such as the American Society for the Prevention of Cruelty to Animals (ASPCA) also have undergone multi-million-dollar campaigns to stop inadequate care of animals by pet owners and shelters (NEW). Other organizations, such as the Animal Welfare Institute, have made it their mission to highlight the number of animals that are eventually euthanized in local shelters and adopted successful slogans such as “adopt don’t shop”. These campaigns may have helped increase the number of people willing to adopt animals from shelters and thereby decreasing the number of animals that are euthanized due to overcrowding.

Conclusion

Contrary to the hypothesis, the euthanasia rate decreased, and the adoption rates increased in Denver after the declaw ban was implemented. The overall number of cats in the shelter decreased, as well. These results imply that instating declaw bans does not harm shelter cat populations, but rather may be beneficial to the shelter system. Based on the results found in this study, more locations should consider drafting declaw ban policies.

Further study that examines more cities with declaw bans is needed to determine if this trend holds true in other locations. In addition, data from shelters in states with a state-wide ban could show whether these results occur in more rural areas. Other countries with declaw bans could also be studied to determine whether there would be differences in response based on population parameters and cultural differences, as well.

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