# Literature review: Adoptions

### **Key findings**

Given the importance of adoptions to shelter lifesaving, it's no surprise that the body of relevant research is extensive—going back decades—and growing. On the one hand, this suggests that there's an ample body of evidence from which to craft sound policy; on the other hand, making sense of the various studies (the findings of which can sometimes conflict with one another) becomes a significant challenge. In any case, below (in no particular order) are the key findings that emerged from this literature review.

- The findings of various research studies suggest that there is a pool of potential adopters largely untapped by shelters and rescue groups. There's good reason to believe that residents of historically marginalized communities—many of whom are already pet owners—would be interested in adopting from shelters and rescue groups, if only these organizations were more accommodating (e.g., extended hours).
- 2. As much as economists might like to think we're all "rational actors" when it comes to making purchases, our behavior suggests otherwise. And the same is true of acquiring our pet (regardless of whether any money changes hands). We may choose to acquire a particular dog (or cat) without giving the decision much thought and/or choose a dog that doesn't necessarily correspond with our stated preferences. However, this doesn't mean that shelters don't also need to consider those who do put great care into the acquisition process and have rather inflexible requirements. The challenge is for shelters to accommodate both types of "shoppers."
- 3. Although fostering is typically thought of as its own program, separate from adoptions, it might be thought of as "adoption-adjacent." The research shows that foster caregivers are effective at getting the animals in their care adopted—often adopting the animals themselves. These results have prompted one leading author on the subject to recommend that shelters "remov[e] barriers to community participation in these programs [in order to] save the lives of more dogs awaiting adoption." Barriers such as lengthy training programs for new foster caregivers, to take one example, can prolong length of stay for dogs that might otherwise be quickly adopted by foster caregivers.

### How this relates to our work

Increasing adoptions is critical to achieving our No-Kill 2025 goal. This has perhaps never been more apparent than in recent years, following many shelters' "return to normal" following the Covid-19 pandemic. Shelter data compiled over the past couple years indicates that adoptions are failing to keep pace with admissions, especially for dogs. Between 2021 and 2022, the estimated lifesaving gap increased by 17.9% (57,000 animals), purely as a result of dog adoptions slowing to 2020 levels.<sup>2</sup>

The focus of this literature is, therefore, on issues related to dog adoptions. This is not to say that some of the issues don't also apply to cat adoptions, only that the emphasis here is on dogs (which, as it happens, is also the focus of much of the published literature).

#### Generally speaking

Perhaps no aspect of adoptions has received more attention than the associated fees—specifically, the potential impacts of reduced-fee and fee-waived adoptions.<sup>3–6</sup> The concerns associated with such adoptions typically have to do with revenue (i.e., fees are used to recoup cost of care and to fund various programs), the welfare of the animals being adopted (i.e., fees reduce the likelihood of giving animals to people who won't care about them), and/or reinforcing our own biases (i.e., adoption fees are used to weed out people not considered good pet owners). A 2006 study compared the level attachment adopters had with their adult cats using two groups: one (78 adopters) that had paid an adoption fee of \$75

(roughly \$114 today) and the other that had paid no adoption fee (95 adopters).<sup>3</sup> The authors found no difference in the level of attachment between the two groups; adopters in both groups expressed strong attachments to their new pets. In addition, they found that adopters in both groups expressed equally positive views about the shelter. Although this study examined the effect of fees associated with adult cat adoptions, there's little reason to think the results would be different if dog adoptions had been included.

Another topic that continues to receive considerable attention is open or conversation-based adoptions, which are intended to remove some of the traditional barriers (e.g., home checks). Here the concerns have to do with animal welfare and reducing the chances that an adopted animal will soon be returned to the shelter (e.g., when a landlord learns that a tenant is violating a no-pets policy). A 2013 study investigated this issue by comparing several key metrics (e.g., level of attachment, health or behavior problems, etc.) between two groups of adopters. Dog owners in the "traditional" group who were interested in adopting a dog were required to bring their current dog(s) to meet the dog they were interested in adopting. In addition, adopters who were renting their housing were not allowed to complete the transaction until shelter staff had contacted their landlord and received approval. Adopters in the open-adoptions group (accounting for 24 cats and 33 dogs adopted, compared to 31 cats and 54 dogs in the "traditional" group) were permitted to complete the transaction after meeting some basic requirements and a conversation with staff. Both groups were provided the ASPCA's Meet Your Match survey, the results of which formed the basis of any follow-up conversation with shelter staff for open-adoptions group, and agreed to participate in a 30-day follow-up survey.

The authors of this study reported that "almost all adopters with resident dogs reported that their dog got along well with the new dog, and "an impressive 96% of the adopted animals were still in the home at the time of follow up."<sup>7</sup>

"In addition, there were no differences in pet retention between the groups. These two points support the hypothesis that shelters using policy based adoption approaches could be wasting effort."

#### A deeper dive: emerging research questions

A secondary benefit of literature reviews are the research questions that emerge from a better understanding of the evidence. These may or may not be directly related to the topic at hand (and may or may not be of sufficient urgency to warrant investigation). Among the questions revealed over the course of the present literature review are the following (listed in no particular order):

- 1. There is a considerable segment of dog owners who obtain their pets from sources other than shelters. To what extent are shelters overlooking or failing to meet the needs (intentionally or not) of these potential adopters?
- 2. How might shelters improve the "consumer experience" to increase adoptions and reduce returns?
- 3. To what extent to common adoption barriers (e.g., home checks) impede lifesaving efforts? And to what extent does their removal expand the pool of adopters to reach historically marginalized segments of the community?

## What the research tells us: An untapped pool of potential adopters

Research suggests that there is an untapped pool of potential dog adopters in our communities. According to the American Pet Products Association (APPA), just 33% of dogs are obtained from shelters or rescue groups. (Other significant sources include breeders: 21%; friends or family: 18%; and pet stores: 16%). Given the number of dogs acquired each year in the U.S., even a modest increase in the number adopted from shelters and rescue groups could close the lifesaving gap of 207,000 dogs (based on 2023 data).

<sup>&</sup>lt;sup>a</sup> https://aspcameetyourmatch.org/

Using the four components of the Canadian Index of Multiple Deprivation (similar to the Social Vulnerability Index used in the U.S), authors of a 2021 study found that dogs and cats tend to move from more vulnerable communities (via relinquishment) to less vulnerable communities (via adoptions). Analysis of one component in particular, Situational Vulnerability (e.g., lower income, less education, etc.), revealed that residents in the 80th percentile (highly vulnerable) were responsible for roughly twice as many relinquishments as adoptions, while the opposite was true for less vulnerable residents in the 20th percentile: these residents were responsible for roughly twice as many adoptions as relinquishments.

This makes sense in light of Pets for Life data indicating that pet owners in more vulnerable communities acquire their pets from different sources than those of pet owners generally (i.e., more from friends and family, fewer from shelters and rescues; see Figure 1).<sup>8,10</sup> It also corresponds to the results of studies showing that shelters and rescue groups are the preferred source of pet acquisition among more affluent<sup>11</sup> and more educated<sup>4,11</sup> residents. It seems likely that, for pet owners in historically marginalized communities, shelters are seen less as resources (e.g., adoptions) and more as safety nets—and one that's potentially risky (e.g., concerns over enforcement/violations, shaming from staff).

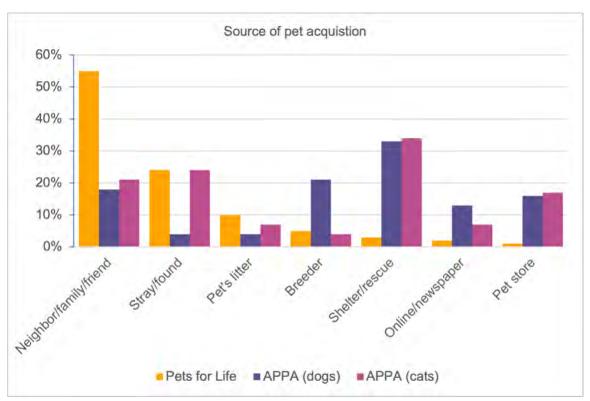


Figure 1. Differences in source of pet acquisition for different segments of the community.

Additional evidence of this untapped pool of potential adopters comes from studies of owner-surrounded animals. The authors of one of these studies reported that "sexually intact, young, mixed-breed dogs and cats obtained at very little or no cost or from a friend and owned for a relatively short time" made up a disproportionate share of relinquished animals. Others have noted that residents with lower incomes are more likely to surrender a pet than are more affluent members of the community; households earning less than \$20,000/year (\$41,000 in 2023 dollars) were at the greatest risk of surrendering a pet. 13

Pet ownership in the U.S. varies by race and ethnicity. Applebaum et al. <sup>14</sup> reported that 70.4% of White residents owned at least one pet (with 53.7% owning at least one dog), compared to 29.0% among African Americans (22.8% being dog owners), 60.0% among Latinx (44.1% being dog owners), and 33.0% among all other races/ethnicities (21.6% dog owners). This suggests that the adoption pool in historically marginalized segments of a community might be relatively small to begin with. (Interestingly,

and in contrast to the studies cited previously, this study found no significant relationship between pet ownership and either education or income. (14)

It's important to note that, although more affluent, more educated residents might be responsible for more adoptions than their more vulnerable neighbors, this doesn't mean that shelters should ignore the more vulnerable residents who are interested in adopting. It's not clear how much adoption barriers (e.g., lengthy and/or overly detailed applications, home checks, etc.) might further the inequity observed in the Canadian study cited previously. But it's also not clear that reduced or waived adoption fees do much to attract these adopters. One study found that "special adoption offer for this pet (reduced fee, no fee, two-for-one, free gift, etc.)" scored very low when adopters responded to the question, "Were the following reasons important to your decision to choose this particular pet?." However, these results captured the sentiments of people who had come to the shelter and adopted a pet. In other words, these were probably more affluent, more educated members of the community to begin with.

### What the research tells us: The "consumer experience"

The latest APPA data<sup>8</sup> reveals a range of sources from which Americans obtain their dogs (Table 1).

Table 1.	Sources o	of doa	acquisition	(APPA data).

Source	Share of total (%)
Breeder (direct)	21
Shelter	19
Friend or family	18
Pet stores	16
Rescue group	14
Other	8
Stray/found	4

With shelters and rescue groups accounting for only 33% of dog acquisitions, there would seem to an opportunity to expand their share. One challenge is understating what potential adopters want—and, despite extensive research on the subject, it's not clear exactly how people decide to acquire a particular dog. As the authors of one study put it, "People have complex preferences and make tradeoffs based on all the attributes that make up dogs; they are not looking for a single feature such as the fact that a dog is a puppy." 16

### Pop culture influences

The popularity of various dog breeds can rise and fall over time, often as a result of their presence in mainstream media. The anthrozoologist Hal Herzog examined this trend, documenting the remarkable influence popular movies can have.

"The best example is the Disney movie *101 Dalmatians*. In the eight years following the 1985 rerelease of the film, the annual number of new Dalmatian registrations increased spectacularly, from 8,170 puppies to 42,816 puppies. The peak in 1993 was followed by the steepest descent in popularity of any breed in AKC history—a decline of 97% within a decade. An even more dramatic example is the 100-fold increase in Old English Sheepdog registrations over the 14 years following the 1959 Disney movie, *The Shaggy Dog.*" 17,b"

Similar, if less dramatic, effects have been associated with other films<sup>19</sup> (Figure 2). Of course, these examples came well before the rise of today's social media, which undoubtedly has its own influence on the popularity of one breed or another.

<sup>&</sup>lt;sup>b</sup> See Holland<sup>18</sup> for additional information about trends in the popularity of various dog breeds.

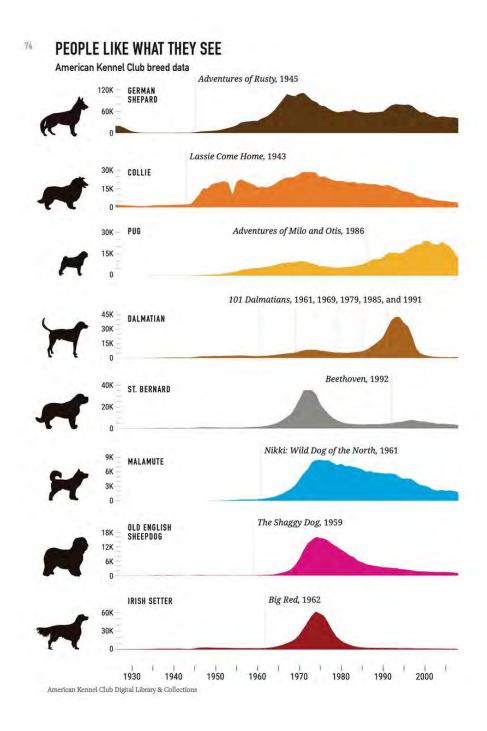


Figure 2. Effect of popular films on breed preferences (source: You Are What You Watch: How Movies and TV Affect Everything<sup>19</sup>).

### Preference for a particular source

Research studies have examined the importance of various sources (e.g., shelter, breeder, etc.) among adopters and potential adopters. In one of these studies, researchers found that the most common reason dog owners acquired a dog from a particular source was because "it was the right thing to do" (selected by 47% of respondents).<sup>20</sup> (The second most common reason chosen, selected by 33% of

respondents, was because "they wanted a specific breed or type of dog.") When respondents were presented with the statement "the only responsible way to acquire a dog is through shelter/rescue," the level of agreement varied by gender identity (more agreement among females) and age (somewhat more agreement among older respondents), but varied little with household income or education level.<sup>11</sup>

These results correspond only partly with those of a 2013 survey of Michigan dog owners (1,012 respondents), showing that women and older individuals—but also respondents with college educations—were more likely to adopt their dogs from a shelter or rescue group. This same survey found that White respondents were more likely to acquire their dogs from a shelter or for the purpose of rescuing them, compared to those of other races/ethnicities.

Another survey found that, although 60% of respondents who had acquired a dog in the past year indicated that they had *considered* adopting from a shelter, but only 39% actually did. <sup>16</sup> A 2012 survey from the American Humane Association reported a similar trend: although 56% of respondents indicated that they would consider adopting a dog from a shelter in the future, only 22% had done so previously. <sup>21</sup> The source of this discrepancy is not entirely clear, it's likely that the variety of dogs available—or *thought* to be available—plays an important role. More than 79% of respondents that were likely to adopt from a shelter indicated that variety was extremely important (18%), very important (>30%), or somewhat important (31%). <sup>16</sup> When asked what they would do if a particular source did not have a dog they were interested in, "nearly 30% of respondents said they would have delayed their decision or waited to find the right dog, while 20% said they would check other sources or keep looking. <sup>16</sup>

One U.S. survey that included both pet owners and people without pets (507 respondents in all) explored attitudes and beliefs surrounding different sources of acquisition. In general, the greatest differences seen in levels of agreement were between male and female respondents, although some other interesting trends emerged as well (Table 2).<sup>11</sup> For example, the greatest level of support for the statement "People should have choices as to where/how to obtain dogs" came from the oldest respondents (55–88 years old) and varied considerably by income level. Support was strong at both ends of the income range but was significantly lower in the middle of the range (\$51–75K/year, roughly \$66–97K/year in 2023 dollars).

Attitudes and beliefs surrounding different sources of dog acquisition (source: Bir et al. 2017).

Statement	Key findings
The only responsible way to acquire a dog is through shelter/rescue	Greater support from female respondents; level of support varied little across age, income, or education categories.
There is a dog overpopulation problem in the U.S.	Greater support from female respondents; level of support increased with age and decreased somewhat across income and education categories.
Dogs in pet stores come from irresponsible breeders	Greater support from female respondents; level of support increased across age, income, and education categories.
People should have choices as to where/how to obtain dogs	Roughly equal support from male and female respondents; level of support increased with age, increased at low and high ends of income range, and varied little with education level.
Every shelter/rescue dog is adoptable	Greater support from female respondents; level of support largely unchanged across age, income, and education categories (except for notably less support among >\$101K incomes).
Importing of dogs for adoption is irresponsible	Greater support from female respondents; level of support increased across age, varied inconsistently with income, and increased slightly with education.

Despite apparently strong support for shelters and rescue groups as a source for dogs, there's evidence that some potential adopters have concerns. For example, an Australian survey of dog owners and potential dog owners (1,647 participants) found that, although 80% of respondents "indicated they would be likely or very likely to obtain a future pet dog from an animal shelter or rescue organization," one-third of respondents "believed that adult shelter dogs often have behavioral problems." It's not clear whether U.S. adopters hold similar views. However, one common reason that adopters in this country acquire dogs from sources other than shelters is because they're skeptical that a shelter will have the type of dog they're looking for. 18

Dog owners with higher levels of education were more likely to indicate that they considered "experience/reputation of source" and "source of dog" to be important factors in their decision to acquire a dog, compared to owners with less education.<sup>11</sup> And a 2011 in-shelter survey of adopters at five U.S. shelters (1,491 participants) reported that roughly three-quarters of respondents found information provided by shelter staff or volunteers to be important in their decision to adopt a particular dog. The next most cited information source (at about 47%) was cage cards.<sup>15</sup>

#### Preference for a particular dog

Regardless of one's preference for a particular acquisition source, there are a number of factors that influence the choice of a particular dog. Comparing the results of one study to another is difficult, in part because the wording is rarely identical from one survey to another, and also because some questions allow for multiple responses while others allow only a single response. In addition, terms like "appearance" are likely to be conflated with various characteristics (e.g., breed, size, etc.) and interpreted differently by different people. Nevertheless, some overall trends are apparent. Traits associated with a dog's appearance, personality, and breed are routinely cited as deciding factors, for example. <sup>4,11,15,16</sup>

One study reported that the top three characteristics considered "very important" by dog owners included "compatibility with owner lifestyle (60%), behavior (58%) and physical health (55%)."<sup>20</sup> Another found that the "single most important reason" adopters chose a particular adult dog from a shelter included appearance (27.3%), personality/temperament (15.8%), and behavior with people (11.4%).<sup>15</sup> Authors of another study "found the dog's personality/behavior as the only characteristic with a positive effect on eventual owner satisfaction.<sup>23</sup> It's important to note, however, that survey respondents were members of the Center for Canine Behavior Studies (CCBS); it's possible, therefore, that they were better positioned to identify a good match for themselves among the variety of available dogs.

Another study presented respondents with "an array of dog profiles" each comprised of seven attributes: age, size, color, breed, the dog's proximity to the respondent, the source (e.g., shelter, breeder, etc.), and the dog's risk of euthanasia. The results revealed no strong preference for any one attribute, prompting the study's authors to conclude that "people have complex preferences, and which features are important vary widely across people." This, in turn, prompted them to suggest that, "If an animal shelter has a great variety of dogs available, it is more likely that the set of features of a particular dog will match an adopter's preferences." This hypothesis was not tested directly but would seem to run counter to the "paradox of choice," whereby the presentation of too many options can be paralyzing.<sup>24</sup>

Additional evidence that physical characteristics are not necessarily the most important factors in the decision to acquire a particular dog comes from identical surveys conducted first in Australia, in 2008, <sup>25</sup> and repeated later in Italy. <sup>26</sup> Results of these surveys indicate that behavioral characteristics were considered more important than physical characteristics in respondents' description of the "ideal dog" Both studies reported strong correlations between respondent's "ideal dog" and their actual dogs, suggesting that perhaps "people own a dog that matches their ideal dog. <sup>25</sup> And previous research (admittedly, from a small study, including only 37 dog owners) has shown a strong correlation between "actual-ideal distances" and the level of attachment one has to their dog. <sup>27</sup> However, it seems reasonable to assume that any causal relationship might work in the opposite direction: a greater level of attachment leads one to think of their dog (or cat) as closer to the "ideal" than they would if they felt less attached to their pet.

Although appearance might not be the most important characteristic for most people interested in acquiring a dog, its importance seems to vary by breed. One U.K. study comparing the attitudes and behaviors of dog owners with three popular brachycephalic [BC] breeds (French Bulldog, Pug, and Bulldog) to those owning seven popular non-brachycephalic breeds (Labrador Retriever, Cocker Spaniel, English Springer Spaniel, German Shepherd Dog, Golden Retriever, Border Terrier, and Miniature Schnauzer) provides some interesting insights. Owners of BC breeds prioritized appearance over other factors (including perceived health) in choosing their dogs and were more likely to "use puppy-selling websites to find their dog." They were also more likely to be "younger, buying their chosen breed for the first time and had no history of childhood ownership."<sup>28</sup> And a study of Danish dog owners found that owners of French Bulldogs "were mainly interested in the dog's distinctive appearance and personality."<sup>29</sup> It's not clear if similar trends exist among dog owners in the U.S.

For many dog owners, the decision of an acquisition source is tied closely to the breed of dog they're most interested in. APPA data indicates that 21% of owners acquire their dogs directly from a breeder.<sup>8</sup> One study reported that respondents (including both pet owners and people without pets) indicating that breed was important to them tended to be from higher income categories.<sup>11</sup> On the other hand, the previously cited survey of Michigan dog owners found that respondents with only a high school education were more likely to have purebred dogs or pit bull terrier-type dogs compared to more highly educated respondents.<sup>4</sup> This same study also found purebred dogs to be especially popular among Latinx and Asian-American respondents, prompting the authors to suggest that shelter have an opportunity to increase dog adoptions by "appealing to men and potential owners of color."

"Further, individuals in their child-rearing years are most likely to have mixed-breed dogs yet are less likely to have acquired them from shelters. Awareness campaigns targeted to families promoting the availability of child-friendly mixed-breed dogs at the local shelter also appear warranted."

A 2013 study of people who had either acquired a dog in the past year or were considering adding a dog to their home in the next year (1,009 participants in all) found that respondents who preferred purebred dogs were more likely to travel longer distances to obtain a dog than were owners who acquired their dogs from sources other than breeders (Figure 3).<sup>16</sup>

These findings would seem to point to an opportunity for shelters. We often hear about how important it is to "meet people where they are." Shelters should consider taking this literally by bringing adoptable animals into segments of the community where neighbors, friends, and family have historically been the primary source of dog acquisition.

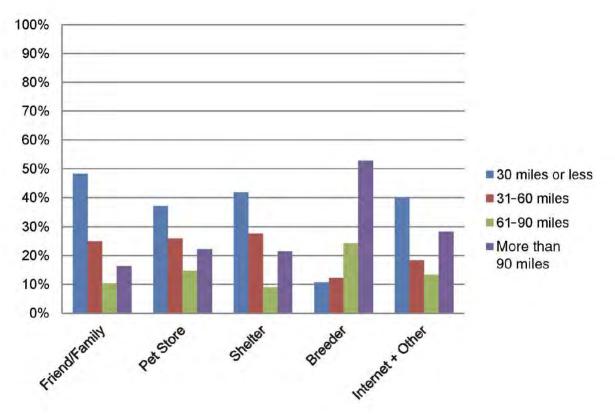


Figure 3. Distance people will travel to obtain a dog from a particular source (source: Garrison et al., 2015).

### Planning for adoption

Not surprisingly, people devote varying degrees of forethought to the acquisition of a pet. As noted previously, only about half of owners who'd recently acquired their dogs indicated that they would delay their decision (nearly 30%) or keep looking (20%) if a particular source didn't have a dog they wanted; more than 40% of respondents had successfully acquired a dog. <sup>16</sup> A 2010 survey of visitors to the Animal Rescue League of Boston found that half of all respondents visiting the shelter were considering a pet sometime in the future but didn't intend to adopt that day. These "browsers," as the authors called them, "represent a potential pool of future adopters for the shelter. One would expect that what they learn about the shelter and the experience they have there will influence the choices they make about where they go to adopt their future pet." <sup>30</sup>

The previously cited survey of CCBS members found that roughly half consider their decision for a period of five months to six years (Table 3).<sup>23</sup> Interestingly, these authors reported that, "Less forethought, ideally less than one week, was found to have a positive effect on eventual owner satisfaction."<sup>23,c</sup> But again, CCBS members are probably not representative of dog owners more generally; it's likely that they are better positioned to identify a good match more quickly than other people who acquire dogs.

Table 3. Time given to the consideration of acquiring a new dog (source: Dinwoodie et al., 2022).

No. of acquisitions (%)
196 (13)
528 (34)
752 (49)
61 (4)

<sup>&</sup>lt;sup>c</sup> A degree of caution is warranted when interpreting these results since the sample was not representative of dog owners generally, skewing somewhat older (mean age 51 years) and heavily female (92% of respondents).

Total 1,537 (100)

As consumers we're all "irrational actors," and this is often no different when we're acquiring a pet. We may choose to acquire a particular dog without giving the decision much thought and/or choose a dog that doesn't necessarily correspond with our stated preferences. However, this doesn't mean that shelters don't *also* need to consider those who *do* put great care into the acquisition process and have rather inflexible requirements. The challenge is for shelters to accommodate both types of "shoppers."

### Initial interactions with adoptable dogs

It's hardly surprising that people interested in acquiring a pet consider their initial interaction to be important to their decision-making process. Authors of one 2013 study analyzing 250 out-of-kennel interactions between dogs (151) and potential adopters/families (154) at Alachua County Animal Services, concluded that only two behaviors influenced adoption decisions: "ignoring play initiation" by, and "lying in proximity" to, potential adopters. "Dogs that were adopted spent half as much time ignoring play initiation by and twice as much time lying in proximity to the adopter than dogs that were not adopted." Other shelter studies have shown that adopted dogs were "most likely to approach or greet the adopter when first met" and that potential adopters preferred dogs who were at the front of their kennels over those who remained at the back of their kennels. Interestingly, another study found that, although "very few adopters indicated the animal's reaction to them as a reason that they chose to adopt their particular pet," the *lack* of reaction "was the most frequently chosen reason for why visitors did not adopt when they were planning to." "30,e"

Reactions not typically perceived to be positive are not necessarily deal-breakers for potential adopters. Authors of one study noted that, although "jumping up was the third most common behavior [adopted] dogs exhibited when first met," this doesn't necessarily mean adopters *liked* the behavior. Instead, they suggest, perhaps adopters "found this to be a friendly and bond-initiating behavior that positively affected their adoption decision." Based on their findings, the authors offered the following recommendations to shelters:

"Shelters should consider taking these animals among visiting adopters or among the general public outside of the shelter in order to provide such hands-on interaction that adopters find so important. Dogs can be taken out of their kennel with a no-pull harness... This may be even more important for dogs that do not show highly adoptable behavior while behind a kennel door."

They might also allocate resources to better allow for such interactions:

"For example, shelters could provide more visiting rooms, longer visiting times, play runs, and options to interact with the animals while they are waiting, such as a treat cup or a toy to interact with the dog... through the cage door when possible." <sup>15</sup>

One wonders if perhaps adopter-dog interactions have been reduced due to lingering pandemic related restrictions (e.g., appointment-only policies). The evidence is quite clear that such interactions are important to many potential adopters.

### What the research tells us: Economics

As noted previously, adoption fees don't seem to be barriers for adopters<sup>15</sup> and this seems to be supported by (unpublished) data from ShelterLuv. Even so, this doesn't mean that adoption fees don't pose a barrier to those who obtain their pets from sources other than shelters or rescue groups (e.g.,

<sup>&</sup>lt;sup>d</sup> As cited in Weiss et al., 2012.

<sup>&</sup>lt;sup>e</sup> The results of this study are rather curious, as the authors explain: "Among the disappointed non-adopters, 'the lack of an animal's reaction to them' was frequently reported as a reason why they didn't adopt that day. In contrast, the animal's reaction was selected infrequently by adopters as a reason for why they chose to adopt the pet they did."<sup>30</sup>

family member, friend, or neighbor). In any case, adoption fees are unlikely to cover the cost of care for many shelter and rescue pets. A study using data obtained from Austin Pets Alive! estimated the daily cost of care (in 2018) to be \$13.57/day for dogs/puppies (and \$12.26/day for cats/kittens).<sup>33</sup> Obviously, some animals will be adopted much more quickly than others—but even a relatively short stay of 10 days can offset a \$150 adoption fee (Figure 4).

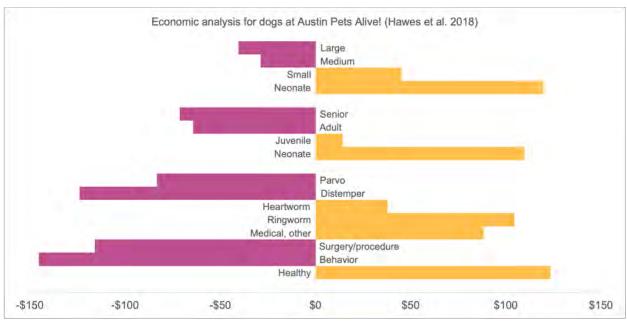


Figure 4. "Profit" or "loss" associated with dogs adopted from Austin Pets Alive! (source: Hawes et al., 2018).

Using data obtained from a survey of Michigan dog owners who were asked about the characteristics they deemed most important in a dog, one team of researchers has suggested that animals considered more desirable (e.g., puppies, purebred dogs) can be priced higher than those deemed less desirable (e.g., older dogs). Interestingly, these same researchers found that medical and behavioral concerns do not necessarily require similar "discount pricing." This is a reflection of a dog's perceived adoptability, of course; the APA! data reveals that behavior issues can be costly to the shelter and different medical issues have very different costs associated with them (e.g., heartworm vs. distemper).

Based on their economic modeling, the authors of the Michigan study recommend that shelters consider pricing the dogs in their care with a "base price"—discounted, as appropriate, for animals typically considered less adoptable (e.g., senior dogs)—"and then encouraging purchasers to consider paying more than that base price as a donation (or legacy costs) to the shelter or as a subsidy for less desirable dogs.<sup>4,f</sup>

### What the research tells us: Foster opportunities

Although the focus of this review is dog adoptions, it's worth briefly mentioning one "adoption-adjacent" element of sheltering: foster programs. The evidence shows that these programs can be used to increase adoptions and, by extension, lifesaving.

A 2015 survey of 669 dog-owning households in the U.S. found that just 17% of respondents had fostered a dog or puppy for a shelter or rescue group.<sup>20</sup> A study of foster programs at 19 U.S. animal shelters during the first four months of the Covid-19 pandemic found that nearly 40% of "foster caregivers were community members with no prior relationship with the shelter, and these caregivers were over four

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f "An important caveat is needed here, however. Pricing is not the only relevant aspect of the dog adoption process that shelters need to consider. Simply lowering prices on older dogs who may be about to enter a life stage with higher health costs may encourage individuals with insufficient means to adopt them. Pricing systems must be tied to appropriate adoption counseling procedures that consider a variety of aspects of the potential placement."<sup>4</sup>

times more likely to [find adopters for] their fostered dogs than those with a pre-existing relationship to the shelter."34

A more recent study of 51 U.S. shelters implementing new programs for temporary fostering and/or brief outings for dogs found that 12% of dogs in temporary foster situations (average duration: 1.6 days) were adopted by their foster caregivers after just two days. And 4% of dogs on brief outings (average duration: 3 hours outside the shelter with a volunteer) were adopted by their caregivers. Many of these dogs had "been in the system" for some time prior to the intervention, suggesting that they were dogs who were unlikely to be adopted immediately.

Commenting on their findings, the authors emphasized the importance of community engagement in lifesaving programs:

"Our findings suggest that not only do interventions that engage individuals beyond the shelter's volunteers and staff lead to more successful programs, but these shorter-duration fostering interventions can significantly impact outcomes for dogs. As such, we believe that removing barriers to community participation in these programs can save the lives of more dogs awaiting adoption in United States animal shelters." 1

Incredibly, the mean live-release rate (LRR) for participating shelters was 91.9% (SD 9.4%; range: 63–100%, median 95.6%); these are obviously high LRRs—yet qualifying shelters were required to have either no brief outing or overnight foster programs, or programs that served no more than 10% of dogs in care. This would seem to challenge the idea that high-LRR shelters have "maxed out" their lifesaving programs.

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