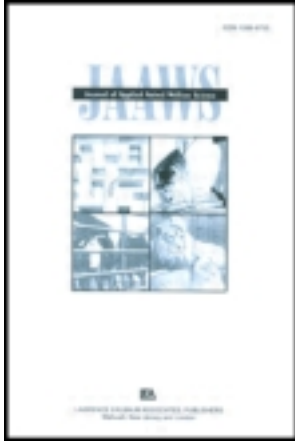


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# Characteristics of Relinquishing and Adoptive Owners of Horses Associated With U.S. Nonprofit Equine Rescue Organizations

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Nonprofit equine rescue organizations in the United States provide care for relinquished horses and may offer adoption programs. With an estimated 100,000 “unwanted” horses per year and few municipal shelters providing wholesale euthanasia, there is a need to minimize the number of unwanted horses and maximize their successful transition to new caregivers. This study’s objectives were to characterize the relinquishing and adoptive owners interacting with nonprofit rescue organizations. Nonprofit organizations ( $n = 144$ ) in 37 states provided information by survey on 280 horses relinquished between 2006 and 2009, from which 73 were adopted. Results show the majority of relinquishing owners were women, whereas adoptive owners were primarily families or couples. Most relinquishing owners had previous equine experience and had owned the horse for 1 to 5 years; about half owned 1 other horse. Three quarters of the adoptive owners possessed additional horses housed on their property. The primary use for rehomed horses was for riding or driving. These findings will serve to help develop effective education programs for responsible horse ownership and optimize acceptance criteria and successful adoption strategies of horses by nonprofit organizations.

There are an estimated 100,000 horses per year in the United States who become unwanted or unmarketable, many of whom, in past years, would have been

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sent to slaughter facilities (Bump, 2008; Messer, 2008). The combination of slaughter plant closures in 2007, the national economic depression initiated in 2008, and concurrent increases in feed costs due to regional drought and higher fuel prices resulted in caregivers who could no longer care for their horses and a greater supply of horses than demand in market channels. Some of these unwanted horses are relinquished to equine rescue and sanctuary organizations located throughout communities in the United States. These organizations provide both temporary and permanent care for the relinquished horses, and many offer adoption programs to rehome horses with new owners. Unlike dog and cat municipal shelters, most equine rescue facilities are independently funded and do not perform wholesale euthanasia on unwanted horses; many are registered as nonprofit entities (501(c)(3)) with the U.S. Internal Revenue Service (IRS). However, nonprofit organizations accepting equines currently are at their capacity, with many refusing to accept any more horses due to limited resources (Holcomb, Stull, & Kass, 2010). Thus, the objective of this study was to characterize and identify the demographics of the owners who relinquish horses to nonprofit equine facilities and those who adopt horses from these organizations. This information, in an effort to reduce the number of unwanted horses, will serve to develop educational programs for novice and experienced horse owners on the responsibilities associated with equine ownership and breeding. In addition, the results of this study will assist nonprofit organizations in developing selection criteria and adoption programs for relinquished horses. Results of the study can help them identify and target potential adopters in order to contribute to the successful transition of these horses into new ownership.

## METHODS

### Study Design

A list of nonprofit equine rescue and sanctuary facilities was retrieved from an online database (Guidestar, USA, [www.guidestar.com](http://www.guidestar.com)) using a keyword search of all organizations registered with the U.S. IRS as 501(c)(3) nonprofit groups as of April 18, 2009. Participation in an online survey ([www.SurveyMonkey.com](http://www.SurveyMonkey.com)) was recruited by postcard invitation mailed to all the identified facilities in August 2009, followed by three reminder mailings at monthly intervals. The survey was open from August 8, 2009, to January 8, 2010. Eligibility requirements to participate were the organizations' ability to accept horses into their facilities and their status as operational at the time of the survey. The Investigational Review Board at the University of California, Davis (protocol #201017974-1) reviewed and approved the use of human participants for this study.

## Survey

Each organization was requested to respond to a 90-question survey, with respondents asked to select a specific case involving an equine (horse, donkey, or mule) relinquished to their facility since January 2008. Organizations could enter data for more than one equine case. The results of this article are based on a subset of the survey with approximately 23 questions dedicated to the relinquishing and adoptive owners' characteristics and background. The characteristics of interest included experience as horse owners, age, gender, ethnicity, income level, details about the original acquisition (for relinquishing owners), and previous and planned use of the horse. A copy of the survey can be obtained by contacting the corresponding author.

## Statistical Analysis

Microsoft Excel 2007 was used to calculate the descriptive statistics. Association between categorical variables was assessed using nonparametric tests due to the nonnormal distribution of the data; choice of test depended on whether one or both variables compared were ordinal in order to improve statistical power in rejecting the null hypothesis of no association. A Kruskal-Wallis test for singly ordered contingency table data was used for the statistical relationship between income and gender of relinquishing owners. The Jonckheere-Terpstra Test (StatXact-9, Cytel Software Corporation, Cambridge, MA) was used to compare ordered age categories of relinquishing and adoptive owners. The Jonckheere-Terpstra test for doubly ordered contingency table data was used to evaluate the relationship between age and income of male and female relinquishing owners. All monetary numbers are reported in U.S. dollars. Not all questions in the survey were answered by each survey participant, and the response of "unknown" was included as one of the responses in some questions. Thus, the denominator used in calculations was the total number of responses for which survey participants provided information.

## RESULTS

A total of 408 registered nonprofit (501(c)(3)) organizations was retrieved from the online database with organizations located in all states except Hawaii, North Dakota, and South Dakota. From 408 organizations to which postcards were mailed, 326 were determined to be eligible, and 144 of these (44%) entered data on 280 horses into the survey. The mean number of cases entered per organization was 2.1 (*SD* 2.8). Only 73 (26.1%) of these horses were rehomed and transitioned into new ownership from the organizations. Forty-one horses

(14.6%) were still in residence either at sanctuaries that provide permanent homes for all horses accepted or that offer both adoptions and sanctuary. Fourteen horses (5.0%) were euthanized, and 152 horses (54.3%) remained at facilities that attempt to rehome them. Information was collected by the survey concerning the relinquishing owners in 69% of the horse cases ( $n = 193$ ), whereas information about adoptive owners was collected for all of the rehomed horses ( $n = 73$ ). Not all questions concerning the relinquishing or adoptive owners in a survey received responses. Characteristics of the nonprofit organizations and relinquished horses, the reasons for relinquishment, and outcome for horses have been reported elsewhere (Holcomb et al., 2010).

### Relinquishing Owners

Basic demographic data showed that 95.0% (170/179) of relinquishing owners were Caucasian, with 3.3% Hispanic/Latino, and 1.7% for all other ethnic groups combined. Almost two thirds of relinquishing owners (109/171) were women. Annual income was known for only 35.4% (68/192) of relinquishing owners, showing homogeneous distribution into income categories with approximately 25% of the owners in each of the following four categories: less than \$20,000; \$20,000 to \$49,999; \$50,000 to \$99,999; and greater than \$100,000 per year. A significant difference ( $p = .032$ ) was seen between income of male and female relinquishing owners, with 62.2% of women (23/37) but only 36.7% (11/30) of men in the lower two income brackets; 18.9% of women and 33.3% of men had income greater than \$100,000. A significant positive relationship was seen between age and income in female ( $p = .0015$ ) but not for male relinquishing owners ( $p = .19$ ).

The age range for the relinquishing owners was less than 18 to over 60 years old with about half the owners (94/171) from 31 to 50 years old. Similarly, at the time the horse was originally acquired, half (76/149) of relinquishing owners were between 31 and 50 years old, only 4.7% were over 60 years of age, and 26.2% were 30 years old or younger. The majority (56.6%) of horses were purchased privately (94/166), whereas 13.3% were offspring of mares owned by the relinquishing owner, and 10.8% had been acquired from a rescue, rehabilitation, or shelter facility. Other methods of acquisition included purchase from auction (7.2%), received as gift (5.4%), and took in as stray or abandoned horse (1.8%); one had been adopted from the Bureau of Land Management. The original cost of the horse to the relinquishing owner was free for 35.9% (37/103) of cases; under \$1,000 for 34.0%; \$1,001 to \$5,000 for 17.5%; \$5,001 to \$10,000 for 4.9%; and more than \$10,000 for 7.8%. Horses were housed on the owner's property prior to relinquishment for 61.7% of responses (116/188), 18.6% were located at a boarding or training barn, 1.6% at a race track, and the remainder were listed as "other" or unknown.

When asked if the relinquished horse was the first horse owned by the relinquishing owner, the answer was “no” in 87.8% of responses (144/164). Length of ownership of the relinquished horse varied, with 22.1% (39/176) owning the horse for less than 1 year, 53.4% from 1 to 5 years, 14.8% for 6 to 10 years, and 9.7% for more than 10 years. At the time of relinquishment, 11.7% (20/171) of the owners possessed one other horse, 15.2% owned two to five horses, 22.2% owned more than five horses, and the remainder did not own another horse.

The primary previous use of the horse by relinquishing owners was unknown or uncategorized in 32.1% of responses (90/280). When known ( $n = 190$ ), owners used the horse primarily for pleasure riding or driving in 24.2% of cases; 21.6% were companion or retired horses not being ridden; 15.8% were breeding mares, stallions, or young stock under age three; 14.7% were from the racetrack; 13.2% were show or competition horses; 8.4% were working horses (school or ranch horses, or pregnant mares used to collect urine for pharmaceutical products); and 2.1% had been free-roaming. Information about show records was available for less than 15% of horses, although 2.5% (7/277) had been competitive at a national or international level.

### Adopting Owners

Of 280 horses entered into the survey, 26.2% (73) had been rehomed. Most of these were rehomed through adoption (94.5%) or purchase (2.7%). For the remaining cases, the organizations retained legal ownership of the horse through a lease agreement with the new home, stipulating the return of the horse if the lessee no longer accepts ownership responsibilities for the horse. Families or couples were responsible for rehoming most of the horses (62.0%, 45/73), followed by individual women (25.0%) and individual men (4.9%). In addition, 2 organizations that care for children and 2 nonprofit equine facilities each adopted 1 horse. None of the horses were rehomed to a university, research, or other educational institute. The annual income level when known ( $n = 28$ ) was less than \$20,000 for 1 new owner, whereas 10 new owners had an annual income of \$20,000 to \$49,999, 9 had an annual income between \$50,000 and \$99,999, and 8 had an annual income over \$100,000. Ethnicity, when indicated, was almost entirely Caucasian (93.8%, 60/64).

The age range of adoptive owners was 31–40 years old for 38.7% (24/62) of rehomed cases, followed by 25.8% for 41–50, 14.5% for 51–60, 12.9% for 18–30, 6.5% for less than 18, and 1.6% for over age 60. No significant difference was observed between age of previous owner at time of relinquishment and age of adoptive owner ( $p = .84$ ) or between age of relinquishing owner at purchase and age of adoptive owner ( $p = .42$ ).

The primary new role for the rehomed horses was for pleasure riding or driving (64.4%) or as companion horses (23.3%). None of the adoptive owners

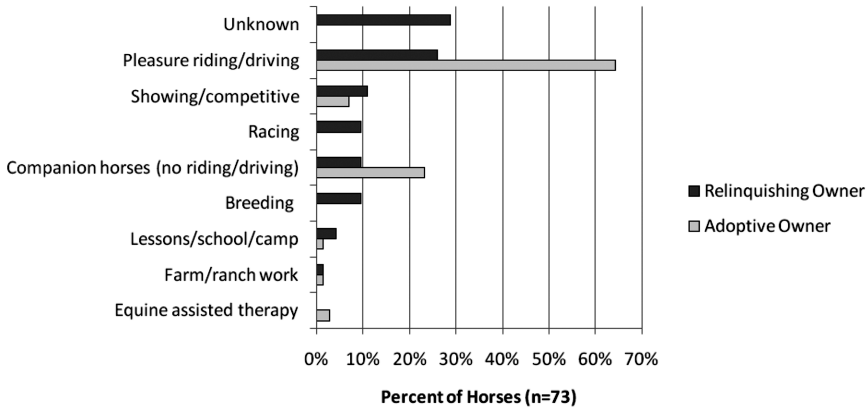


FIGURE 1 Comparison of the use by relinquished and adoptive owners of rehomed horses.

planned to use the horse for breeding or racing. Figure 1 shows a comparison of the 73 rehomed horses’ use prior to relinquishment and the intended use in their new homes by adoptive owners.

Various health, nutritional, and training rehabilitation services provided by the nonprofit organizations to the horses prior to being rehomed with adopting owners are presented in Figure 2. The 4 services provided to more than 70% of the horses were deworming or parasite control (67/73), hoof care (62/73), vaccinations (60/73), and dental care (53/73). Most horses (38/73) were fed diets formulated to achieve weight gain prior to adoption. Approximately one

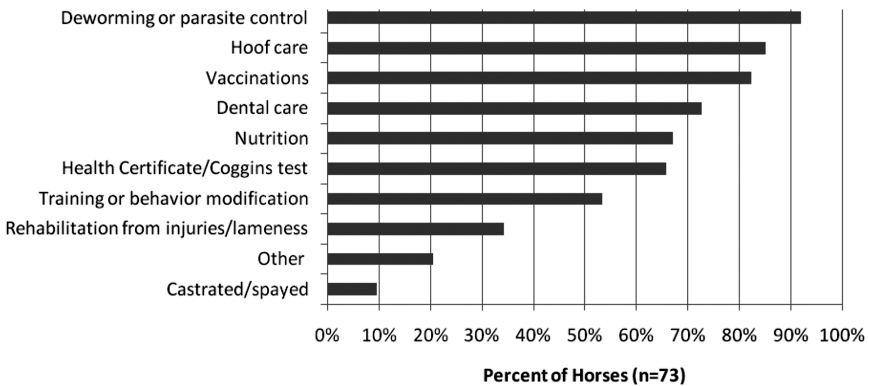


FIGURE 2 Types of rehabilitation services provided horses following relinquishment and prior to being rehomed with adopting owners.

third of the horses received treatment for injuries and lameness (25/73); more than 50% of the horses were subjected to training or behavior modification (41/73) prior to adoption by new owners.

## DISCUSSION

Society's changing view of the role of horses in our communities has profoundly affected the options for those who are no longer wanted. Horses were traditionally viewed as agricultural nonhuman animals primarily providing draft power, transportation, or meat products for human consumption; in recent decades, however, they are increasingly considered companion animals serving roles in recreation, entertainment, or as pets. This change has prompted federal and state legislators to draft bills that would prohibit the slaughter of horses for human consumption in the United States. In 2007, the three remaining federally inspected equine slaughter plants in the United States were closed due to language in the federal Agricultural Appropriations Bill (2006). The closure of the slaughter plants eliminated a viable outlet for owners to dispose of unwanted horses. In the year prior to the closures of the plants, 104,899 horses were slaughtered in the United States (National Agricultural Statistics Service, 2009). However, unlike the municipal shelters afforded to unwanted cats and dogs in local communities, there is a dearth of publicly supported shelters or euthanasia programs to accept unwanted horses relinquished by their owners (American Welfare Council, 2009). Thus, the growing situation of unwanted horses in the United States parallels the overpopulation issue of other companion animals in society, especially dogs and cats.

Finding solutions for minimizing the number of unwanted horses is considered by many the most problematic current issue facing the horse industry (Stowe, 2010). This study identified 326 active, registered nonprofit organizations in the United States that care for unwanted horses. As previously documented, these 326 organizations have an approximate capacity for just 13,700 horses (Holcomb et al., 2010), which is a small percentage of the 100,000 horses who are believed to become unwanted every year (Bump, 2008; Messer, 2008). Thus, there is a viable need to minimize the number of unwanted horses availed to nonprofit organizations and to maximize the successful transition of these horses to new ownership.

Almost one third of the horse cases entered into the survey by nonprofit equine rescue and sanctuary organizations lacked any information about the relinquishing owner. Not known is whether the organizations simply did not record owners' details for these cases, the owners were unknown, or if relinquishing owners declined to provide information. Although some detailed information on the adoptive owners was known for all the horses who were rehomed, there

were considerably fewer cases of rehomed horses ( $n = 73$ ) than relinquished horses ( $n = 280$ ) in the study. The demographics of known relinquishing owners and adopters were similar, with more than 90% ethnically Caucasian and more than 80% with previous experience in horse ownership. However, the adopters tended to have a higher personal income than did relinquishing owners. The overall age and income demographics of both the relinquishing and adoptive owners in the United States are consistent with those for the general horse-owning population as reported by the American Horse Council (2005), with approximately half of horse owners stating income less than \$50,000 and one fourth stating income greater than \$100,000. A more recent online survey showed markedly higher income levels, however, with only about one fourth of horse owners stating income under \$50,000 and more than one third of respondents stating income over \$100,000 (Stowe, 2010). Looking at income based on the gender of the relinquishing owner revealed disparity, as individual males had higher income than individual females, unrelated to age, whereas age and income were positively associated for females. Two thirds of females earned less than \$50,000 per year, the opposite of findings for relinquishing male owners.

The need for more education of horse owners, especially first-time horse owners, is often promoted as one approach to reduce the number of horses who become unwanted each year (Unwanted Horses Coalition, 2009). This survey documented that for a minority of relinquishing owners, the horse was their first or only horse. However, the majority of relinquishing owners had previous equine ownership experience and owned this particular horse from 1 to 5 years; almost half the owners still owned at least one other horse. Thus, although educational programs need to address both prospective and novice owners on many aspects of horse health and care, these programs should also address experienced and current owners regarding the breadth and depth of the obligations of owning and caring for one or more horses.

Expensive horses did not tend to be relinquished because 70% of relinquished horses had originally been acquired for less than \$1,000. The majority of the relinquished horses had been purchased through private channels by their owners, consistent with transactions found in a survey of the Texas horse industry (Gibbs et al., 1998). However, 13% of the relinquished horses were the offspring of mares owned by the relinquishing owner. If this percentage were applied to the estimated 100,000 unwanted horses per year in the United States, then the indiscriminate breeding of horses without regard or assurance for their offspring's lifelong care and training may contribute approximately 13,000 horses annually to the nationwide problem. This number of horses is equivalent to the estimated capacity of 13,700 horses at the 326 nonprofit equine rescue and sanctuaries in the United States (Holcomb et al., 2010). Education programs that address the responsibilities associated with the breeding of horses may be beneficial in efforts to reduce the number of unwanted horses. Fees associated with licensing horses or breeding

services may provide revenue for support services such as education, shelters, preventive health care, and euthanasia for unwanted horses in local communities.

The primary use of horses in the general U.S. population is for pleasure, followed by racing, showing or competition, breeding, riding schools and camps, and farm or ranch work (National Animal Health Monitoring System [NAHMS], 2006). This large variety is similar to the previous roles of relinquished horses and is in sharp contrast to the intended use of the rehomed horses as almost entirely for pleasure riding or as companion animals (Figure 1). No horses were adopted for use as breeding stock or racehorses. Organizations often advertise adoptable horses as being suited only for light riding or companionship, and adoption or lease agreements may include restrictions on other use such as breeding activities. Three quarters of adoptive owners possessed other horses at the time of acquisition of the rescue horse and thus presumably were aware of the monetary and time commitment horse ownership requires. The majority also planned to house the horse on their own property. People who are already equipped to care for horses on their own property and have the necessary supportive contacts (veterinarian, farrier, feed dealer) may feel that acquiring a rescued horse presents only a minimal labor and financial burden.

Nonprofit organizations should consider selection criteria of the horses accepted to their facility and the rehabilitation, training, and marketing of rescued horses with traits and training consistent with pleasure riding and companion horses in order to maximize the number of adoptions. The marketing efforts for rehoming horses could be expanded to include not only current horse owners but also potential first-time horse owners. First-time horse owners may require more education on the care and handling of the horse, along with assistance in selecting an appropriate horse to match their skill level and satisfy their intended use of the horse.

Some owners relinquish their horses due to costs of treatment for illness or lameness or the loss of intended use of the horse due to these conditions (Holcomb et al., 2010), and nonprofit organizations provide diverse health and rehabilitative services to the relinquished horses. Over 70% of the relinquished horses prior to adoption received parasite control treatments, vaccinations, dental procedures, and hoof care. These health care treatments are common management practices performed on a routine basis for most domestic horses (NAHMS, 2006) and would not be considered therapeutic for illness or other pathologies. However, 30% of the rehomed horses were rehabilitated for illness or lameness after their relinquishment to the nonprofit facilities. This is similar to a recent study that documented approximately 75% of the horses offered for donation to university teaching and research programs had health or lameness problems (Bowman, Marshall, & Blikslager, 2010). Education efforts regarding both prevention and rehabilitation could target owners in order to reduce relinquishment of ill or injured horses.

About half the relinquished horses received some training or behavior modification—possibly to prepare the horse for a more useful role, to improve ease of handling, or to alter inappropriate or dangerous behavior. Owing to the diverse background of the relinquished horses, the training of these horses for utilization as either pleasure riding or companion animals may be a key component of a successful transition to new ownership. Marketing strategies offering assurance or return policies for rehomed horses that do not meet their adoptive owners' expectations may be advantageous in soliciting potential new owners, especially first-time owners.

Information on the relinquishing and adoptive owners in this study pertains to the 144 nonprofit equine rescue and sanctuary facilities that responded to this survey and may differ from organizations that did not respond and those without nonprofit status.

## CONCLUSION

Additional research is needed on the characteristics and motivation of people who relinquish horses and who adopt “rescued” horses versus those who prefer to acquire horses through conventional market channels as well as what characteristics are key to successful adoptions. The nonprofit organizations are in the ideal position to collect data that could be used to develop a statistically derived set of adopter criteria. Several comments on the surveys indicated that finding time to do so would be difficult, and thus formulating questions to capture the most appropriate information in a timely manner would be critical.

In conclusion, the information provided by this survey on the demographics and characteristics of relinquishing and adoptive owners will assist nonprofit organizations to develop acceptance criteria and market adoption programs to optimize their resources and maximize the successful transition of unwanted horses to new ownership. In order to decrease the number of unwanted horses, breed registries, equestrian organizations, equine publications, veterinarians, and other industry professionals play important roles in educating novice and experienced horse owners on their responsibilities while also supporting the efforts and programs of nonprofit rescue organizations in local communities.

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