

UNIVERSITY OF KENTUCKY

Lexington Humane Society

Analysis of Volunteers

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Executive Summary

The Lexington Humane Society depends substantially on volunteer labor yet suffers from a high volunteer attrition rate. Using data from the organization's database and a survey of volunteers, this project paints a demographic picture of the volunteer population and identifies traits that affect volunteer longevity.

The evidence shows that the organization's volunteers are overwhelmingly likely to be pet-owning women with no children at home who are motivated to volunteer because it allows them to act on their values. Middle-age individuals are more likely than those under 25 or over 65 to become long term volunteers, and individuals who have recently lost a pet are less likely to become long-term volunteers than those who have not. There is some evidence that attending religious services once a year or less, identifying as a political moderate and working full-time make an individual more likely to become a long-term volunteer. There is some evidence that having a spouse, being a student, or having a friend or family member who already volunteers at the organization make an individual less likely to become a long-term volunteer.

Based on this study, the author recommends that Lexington Humane Society: 1. make its orientation process more applicant driven; 2. use "values" as a theme in volunteer recruitment and retention; 3. take steps to improve the retention rate of those who have recently lost a pet; and 4. Take steps to raise its profile among demographics that are likely potential long-term volunteers, such as middle-aged, childless, pet-owning women.

Problem Statement & Research Questions

Lexington Humane Society, or LHS, is a non-profit animal shelter and humane agency that depends substantially on volunteer labor to carry out services. The current volunteer program has a high attrition rate both post-orientation and within the first year of volunteer service. This paper seeks to find whether there are certain characteristics common to long-term volunteers, defined as those volunteers who serve the organization for at least a year, that differentiate those volunteers from the remainder of the LHS volunteer population and the Lexington population at large.

What, if any, are the characteristics common to long-term volunteers that could help LHS more effectively identify and recruit this type of volunteer? By exploring this question and thus increasing the

understanding of the LHS volunteer force, the author hopes to enable the organization to increase the effectiveness of its current volunteer program.

Program & Organization Overview

Lexington Humane Society is a non-profit animal shelter and humane agency located in Lexington, Kentucky. The society defines its mission as follows: “To advocate the compassionate treatment of animals; educate the community on responsible, lifelong pet ownership; and promote adoption as the best option when searching for a new pet.”¹ LHS’s chief functions are to provide care for thousands of stray and abandoned animals every year, and to facilitate the adoption of as many of those animals as possible. In addition, LHS provides a variety of services, including low to no cost spay and neuter services; a fund for shelter animals with extreme medical needs; and educational outreach programs in various forms, such a day camp for schoolchildren and free classes for pet owners. These programs are supported by several annual fundraisers and events.

LHS has 26 full-time employees, 15 part-time employees, and about 300 active volunteers.² Volunteers are asked to serve 4 hours per month.³ Using this as a rough estimate of volunteer hours, the volunteers’ total annual work is the equivalent of seven full-time employees, a significant portion of the LHS labor force. Both the organization’s president and its volunteer coordinator have affirmed that without volunteer help, LHS simply could not accomplish its current level of activities.

LHS does not have a volunteer recruitment program. Individuals who would like to volunteer must first fill out an online application form, and then undergo a telephone interview. If the volunteer coordinator approves of this individual as a potential volunteer, the person is then invited to a two-hour orientation at the LHS facility. After orientation they may begin volunteer service.

According to volunteer coordinator Whitney Wilgus, the would-be volunteers then split roughly into thirds, nearly all following one of three paths of action. Approximately one-third of the group at orientation never reports for any sort of volunteer duty or has further contact with LHS. Another third volunteer frequently over the next several months, but gradually stop showing up. The final third become regular volunteers, serving the organization on a long-term basis. Ms. Wilgus describes a volunteer’s one year anniversary as the confirmation point: the great majority of volunteers who serve

¹ Lexington Humane Society website. www.adoptlove.net

² Whitney Wilgus, email communication, 12/10/2010.

³ Whitney Wilgus, Lexington Humane Society volunteer coordinator. Interview, 10/18/2010.

for a year will stay involved with LHS for years to come. It is these long-term volunteers who are most valuable to LHS. Their knowledge of the organization and its programs grows along with their continuing hours of service, and they make up the foundation of the volunteer base that LHS depends on.

Literature Review

The most recent Current Population Survey found a 65% volunteer retention rate among the U.S. population at large – that is, of those adults who volunteered for any organization in 2008, 65% volunteered for an organization in 2009.⁴ However, that is a measure of what percentage of individuals are involved in volunteering for any organization for two consecutive years, not necessarily with the same organization. In an article written by Hager and Brudney for the Urban Institute (2004), non-profit managers were asked to approximate their organization's volunteer retention rate. The median answer was that 80% of volunteers involved with the organization a year ago were still involved at the time of the study.⁵ Volunteer retention numbers from year to year are not widely publicized by organizations, and the incongruity of the above numbers illustrates the difficulty of identifying what can be considered a "good" or "average" retention rate.

The Urban Institute (2004) does identify a number of factors found to positively or negatively impact retention rate. Factors that positively influence retention rate include recognition of volunteers, providing training and professional development, screening volunteers and matching them to appropriate tasks, and using current volunteers to recruit new volunteers. Overwhelmingly, the greatest negative influence on an organization's retention rate is the percentage of volunteers under age 24 – a high percentage of young volunteers correlates with a low retention rate.⁶

In their work on volunteerism, E. Gil Clary, Mark Snyder et al (1998) argue that six motivational factors drive individuals in volunteer service. According to Clary and Snyder (1998), individuals volunteer for one or more of the following reasons: to express their values, to learn and gain new skills, to form relationships with others, to promote their careers, to feel better about themselves, or to reduce guilt and feel better about their own problems.⁷ Richard Freeman (1997), analyzing volunteerism from an economic point of view, argues that many individuals volunteer only when they are asked to do so. He also concludes that "standard labor supply explanations of volunteering account for only a minor part of

⁴ Volunteering in America.

⁵ Hager & Brudney, 18.

⁶ Ibid.

⁷ Clary, Snyder et al. Clary, Snyder.

volunteer behavior”⁸. Individuals who volunteer are likely to have “high valuation of time”, or to be “worth” more from an economic standpoint: they tend to have relatively high wages and years of education.

In an extensive review of volunteer literature, David Horton Smith (1994) argues that a broad range of variables is necessary to explain volunteer behavior. Most studied are the social variables, or individual characteristics of the individual. Generally speaking, the literature finds that individuals with socially ‘dominant’ or secure characteristics volunteer more; being married, middle-aged, well-educated and middle or higher income are positively associated with volunteer participation. Volunteer attitudes have also been the subject of much study. Individuals with a high sense of altruism, political empowerment and civic duty are more likely to volunteer; as are individuals who believe the organization they serve is an effective one and those who perceive the benefits of volunteering to outweigh the costs. But according to Smith (1994), we know little about the environmental characteristics, like an individual’s neighborhood; the situational characteristics, such as whether an individual was asked to join or whether they received an organization’s services; and the personality characteristics that influence an individual’s likelihood of volunteering.⁹

In a study by Sandra Neumann (2010) that focuses exclusively on animal welfare volunteers, the volunteers were overwhelmingly (over 90%) female, white, heterosexual, and pet-owning. They were likely (50-70%) to be employed, childless, married or partnered, and Democrat-leaning. Over 66% had household incomes of \$50,000 or more and almost 44% were between 40-59 years old. Thirty four percent identify as Protestant, 20% Catholic, 17% agnostic or atheist, 16% non-denominational/spiritual/eclectic, and 14% as other (Jewish, Buddhist, Mormon, etc.)¹⁰ Of Clary & Snyder’s (1998) six Volunteer Functions Inventory motivators, the volunteers were most strongly motivated by reasons related to personal values and promoting their own understanding.

Multiple articles cite a strong historical connection between the animal welfare/animal rights movements and feminism.¹¹ Other articles by Hal Herzog (1993) and Jamison, Wenk and Parker (2000) argue that animal activism, particularly participation in the animal rights movement, can function as religion in the lives of activists. Jasper & Poulson (1995) argue that animal rights activists frequently

⁸ Freeman.

⁹ Smith.

¹⁰ Numbers do not equal 100% due to rounding.

¹¹ Emel & Wolch; Unti & Rowan.

become involved in the movement after experiencing a “moral shock” and that they are rarely recruited or asked to join, but decide on their own to become involved.¹²

It is fair to say that the existing research and literature have established a connection between animal rights activity and low levels of involvement with conventional religious practices.¹³ Logistically, this makes sense on multiple fronts: if an individual is very involved in an activity, such as animal activism, he or she has less time for other activities such as church attendance. Additionally, animal rights activists may consider their work on behalf of animals to provide the driving sense of purpose in their lives, a sense of purpose similar to what others find in religious practices. But like most humane societies, LHS is an animal welfare rather than an animal rights organization.¹⁴ The relationship between animal welfare activism and religious practices is less well explored, and one of the goals of this project is to investigate that relationship in the LHS volunteer population.

Methodology

Two related sources of data are used in this project. The first source is Lexington Humane Society’s volunteer database. With the introduction of a new volunteer management program in the summer of 2009, LHS began maintaining an online database of current volunteer and applicant demographics. With the commencement of this project in the fall of 2010, LHS began preserving the records of individuals who ceased volunteering and those who failed to report for volunteer service after completing orientation. Because of this, I can compare data on six subgroups within the LHS volunteer population: long-term volunteers, short term volunteers, former volunteers, individuals who have completed orientation but have not served any hours, individuals who dropped out of the program after orientation, and applicants who have yet to go through the orientation process. Key variables available for comparison are gender, age range, educational level and zip code. For some entries, there is information about marital status, whether or not an individual is currently in school, and the presence and number of household pets.

The second source of data is a survey created for this project to provide more in-depth information about the LHS volunteer population.¹⁵ Using the available information about LHS and the

¹² Japser & Poulson

¹³ Unti & Rowan

¹⁴ Animal welfare is founded in belief in kindness and against all suffering; animal rights supports animals’ intrinsic value and their right to the same considerations as humans.

¹⁵ See Appendices A & B.

literature noted above, I created and pre-tested two online surveys designed to analyze the demographic, situational, and motivational characteristics of the LHS volunteer population.¹⁶ Email invitations to participate in this project by clicking on the survey link went out to a population of 92 volunteers who have served LHS for a year or more, 87 volunteers who have served for less than a year, and 32 former volunteers; the responses were separated according to the groups above.

Not everyone who fell into these volunteer groups in the LHS database received an invitation to take the survey. Those who did receive a survey invitation were individuals whose email addresses were on file, who did not object to being contacted for the survey, and who were classified as long-term, short-term, or former volunteers in the LHS database as of 3/13/2011. Everyone in this population had previously received an email from LHS administrators informing them about the project and giving individuals the opportunity to opt out of being contacted for the survey. Surveys were not linked or marked by an individual's email or IP address, hence the researcher could not match surveys to the individuals who had completed them. Response rates to the survey were as follows:

Survey Response Rates

VOLUNTEER GROUP	# INVITED	# RESPONSES	RESPONSE RATE
Long term volunteers	92	53	58%
Short term volunteers	87	43	49%
Former volunteers	32	11	34%

Source: author's calculations

Because the goal of this research is to see which factors influence the likelihood that an individual will become a long-term volunteer, volunteer type is the dependent variable. This variable is an ordinal one; from most to least desirable the categories are long-term volunteer, short term volunteer, former volunteer, orientee with no service hours, applicant, and dropout orientee.¹⁷ Another way of understanding these variable categories is that they rank the amount of service that members of the group have provided, from those who provide the most service to those who actually cost the organization resources.

¹⁶ Surveys are identical except for wording that is specific to current or former volunteers.

¹⁷ Former volunteers are ranked more highly than orientees with no service hours or applicants because unlike the latter two groups, former volunteers have provided some service to the organization. Not all applicants are invited to attend orientation and not all those invited do attend, which is why no-hour orientees are ranked more highly than applicants. Dropout orientees are ranked at the bottom because they have cost the organization resources without providing any services.

The following two tables show the number and percentage of each volunteer type group in the LHS database and the survey:

LHS Database: Volunteer Group Sizes in Numbers and Percentages

GROUP	# IN GROUP	GROUP'S SHARE OF DATABASE
Long-term volunteers	118	18%
Short-term volunteers	187	29%
Former volunteers	106	16%
Orientees with no hours	74	12%
Applicants	127	20%
Dropout orientees	31	5%
TOTAL	643	100%

Source: author's calculations

Survey: Volunteer Group Sizes in Numbers and Percentages

GROUP	# IN GROUP	GROUP'S SHARE OF SURVEY
Long-term volunteers	53	50%
Short-term volunteers	43	40%
Former volunteers	11	10%
TOTAL	107	100%

Source: author's calculations

Data from both the LHS database and the survey was originally available in Excel format. The data from both sources was imported into STATA and analyzed using an ordered probit model. The ordered probit model was chosen because it is a model designed to analyze ordinal or binary data, and in these datasets, the dependent variable is ordinal and all the independent variables are either ordinal or binary.

To better quantify the impact of each independent variable, the marginal impact of each one on the probability of becoming a long-term volunteer was then calculated.

Data Review & Analysis

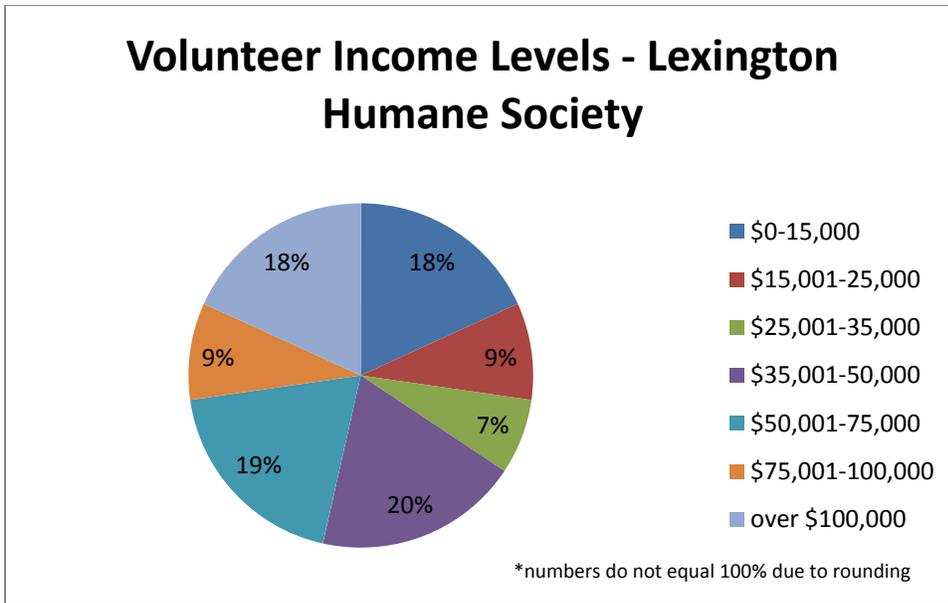
Before considering what factors make a potential volunteer more or less likely to stay with the organization, it is useful to understand some basic characteristics of the LHS volunteer population. The most striking characteristic is that this is an overwhelmingly female population. Eighty-two percent of all individuals in both of the project's datasets are female. Narrowing the scope to just the short-term and long-term volunteers, the proportion becomes even greater: 85% of the organization's currently active volunteers are women.

The numbers also suggest that a relatively high number are single. Marital status data is available for almost two-thirds of the total individuals analyzed, and 74% of those people are single. If we look at just current volunteers, that number drops to 65%. However, the incomplete nature of marital status data makes the estimate questionable.

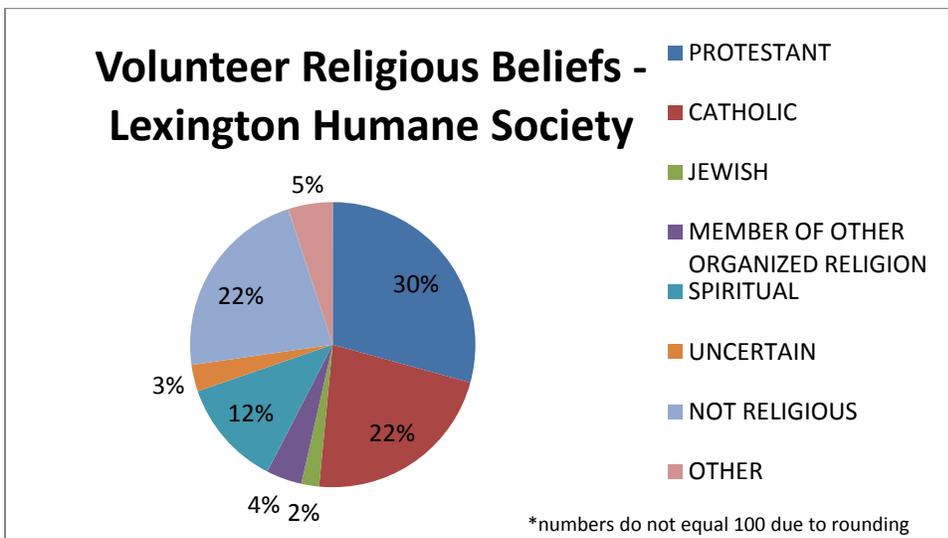
Unsurprisingly, 92% of individuals across the six subpopulations and 88% of current volunteers are pet owners. Overwhelmingly, the most popular pets are cats and dogs.

Data about a greater number of variables is known for the 107 individuals who completed the online survey, and that information provides a fuller profile of the current volunteer force. Parenthood does not seem to go with pet-oriented volunteerism: almost 90% of the current volunteer survey-takers have no children at home. When it comes to motivation, the volunteers are overwhelmingly driven by one thing: 96% of the long-term volunteers and 86% of the short-term ones said they are motivated to volunteer at LHS because it allows them to act on or express values. Less than 10% cited career-related goals as a reason to volunteer. The other four VFI motivators – build social relationships, grow psychologically, learn new & different skills and reduce negative feelings – were each cited as motivators by about 30% of volunteers.

The income levels and religious beliefs of these volunteers are all over the map, as the following charts demonstrate.



Source: Survey Monkey calculations using author's survey



Source: Survey Monkey calculations using author's survey

Despite the wide spread of volunteer income and religious beliefs, when analyzed these factors do not seem to affect how long a volunteer will remain with the organization. The volunteers' age ranges and educational levels also show a wide disparity – however, based on the ordered probit model, age and educational level are significant predictors of how long a volunteer will remain with LHS.

Using volunteer types as the dependent variable, or what we are trying to predict, the ordered probit model contains the following independent variables: gender, marital status, number of adults in

household, number of children in household, number of dogs in household, number of cats in household, age range, educational level, household income, political identification¹⁸, student status¹⁹, work status²⁰, frequency of attendance at religious services, whether the individual self-identifies as a feminist, whether the individual lost a pet in the year before they became involved at LHS, whether the individual helped care for pets growing up, and whether the individual regularly volunteers at any other organizations. It also controls for whether the individual was recruited to volunteer, whether they had friends or family already volunteering at the organization, whether they had previously adopted at LHS, and whether their service was prompted by a particular event.

This model was run using three sets of data: the data from the survey results, data from the LHS volunteer database, and data from both the survey and the LHS database. This combination of datasets is possible and valid because all of the significant variables found only in the survey dataset are sufficiently independent of other variables. None of those variables are substantially influenced by any of the variables that the survey dataset shares with the LHS database.

Because of the length of the three ordered probit models, they are reproduced in the appendices²¹ rather than the body of this paper. A table of all significant variables found in the models is below. A variable with a z-score of +/- 1.65 is considered significant at the 90% confidence level; a variable with a z-score of +/- 1.96 is considered significant at the 95% confidence level. In other words, we are 90% confident that variables with a z-score of +/- 1.65 have an impact on how long a volunteer serves LHS; we are 95% confident that variables with a z-score of +/- 1.96 have an impact.

Z-scores highlit in yellow indicate that the variable has a significantly positive effect; scores highlit in gray indicate that it has a significantly negative effect. In the table above, it is clear that one set of variables jumps out as having a positive effect on volunteer longevity: the middle-age ranges.

Volunteers were grouped into six age categories: 18-24, 25-34, 35-44, 45-54, 55-64 and 65 plus.

²² In the ordered probit model, 18-24 was used as the reference category. So according to all three

¹⁸ Liberal, moderate, conservative, other, not interested in politics.

¹⁹ Student or non-student

²⁰ Full-time, part-time or not working for pay

²¹ Appendix C

²² In 613 of 643 entries, volunteers either selected one of these age ranges in a survey or were placed into the correct range based on their age as listed in the LHS database. The other 30 individuals indicated that their ages fell into ranges different than the ones used for this analysis; those 30 individuals were placed into the category that contained the majority of ages within their self-described category.

Statistically Significant Variables in Ordered Probit Models

VARIABLE	SURVEY - Z-SCORE	LHS DATABASE - Z-SCORE	COMBINED DATASET - Z-SCORE
spouse	0.56	-3.52	-3.51
# of dogs	2.21	-0.92	-0.26
Recent loss of pet	-1.65	n/a	-1.67
Religious attendance once a year or less	1.72	n/a	1.32
Doctoral/prof degree	-2.62	2.17	1.53
Master's degree	0.02	2.52	2.80
Some grad school	-0.57	n/a	0.38
Bachelor's degree	0.92	3.32	3.41
Associate's degree	n/a	-0.01	-0.06
Some college	n/a	2.23	1.86
Age 25-34	1.06	0.61	0.88
Age 35-44	1.98	2.17	2.53
Age 45-54	0.01	1.51	0.79
Age 55-64	2.00	3.48	3.68
Age 65+	0.02	0.34	0.61
Political moderate	2.23	n/a	0.74
Student	2.41	-4.43	-3.62
Works full time	2.17	n/a	0.37
Friend/family volunteer	-1.74	n/a	-1.07

models, individuals between 35-44 and 55-64 are significantly more likely to become long-serving volunteers than those who are 18-24. The numbers also indicate that, after the 18-24 year olds, the group least likely to become long term volunteers are those 65 and up.

Recent loss of a pet is significantly likely to negatively impact a volunteer's length of service, according to both models that were able to use this variable. According to the survey-based model, having family and friends already serving as LHS volunteers when an individual begins their service has a significantly negative impact; according to the combined model, the negative impact is not enough to be significant.

According to the database and combined models, having a bachelor's degree, master's degree or some college are all significantly likely to have a positive impact on a volunteer's length of service. In the survey model, none of these were found to have a significant impact on volunteer longevity. None of the models found that having some graduate school or an associate's degree has any significant impact on length of volunteer service. The PhD results are contradictory: in the database model, having a PhD was found to have a significant positive impact; in the survey model, a significant negative impact; and in the combined model, an insignificant positive impact.

All three models show that working full-time, identifying as a political moderate and attending religious services once a year or less yields a positive z-score. The models diverge as to whether these factors are enough to be significant, though: only the survey model shows that full-time work, being politically moderate or attending services once a year or less each have a significant positive impact.

Three other variables show mixed results. According to the combined model and the LHS database model, being married has a significant negative impact on the length of a volunteer's service. Yet in the survey model, being married has a low positive z-score and no impact on volunteer longevity. And in the survey model, having dogs has a significant positive impact on volunteer longevity. But in the other two models, having dogs yields a negative instead of a positive z-score, although the scores are too low to have an impact on service longevity.

The student variable yields contradictory results. According to the combined and LHS database models, being a student has a significant, strongly negative effect on volunteer longevity. Yet according to the survey model, being a student has a significant positive effect.

To provide a fuller perspective on the impact of each independent variable, the marginal impact of each one on the probability of becoming a long-term volunteer was calculated. This calculation is different from the ordered probit z-scores discussed above, because those z-scores show the impact of each variable across the scale of volunteer longevity, from dropouts to long-term volunteers. The marginal impact calculations consider a variable's impact on a binary end result: whether or not an

individual is likely to become a long-term volunteer. The combined dataset was used to calculate these marginal impacts, because the combined dataset is the most robust of the three.

The results echo the findings of the z-score measurements. The same eight variables that have a significant effect on volunteer longevity as a whole in the combined dataset also have a significant effect on the probability of an individual becoming a long-term volunteer. Those variables, and their probable impacts, are listed in the table below. Having a Master’s, bachelor’s or some college education makes an individual significantly more likely to become a long-term volunteer; so does being between the ages of 35-44 or 55-64. Having a spouse, having recently lost a pet, or being a student each make an individual less likely to become a long-term volunteer.

Marginal Impact Probabilities of Statistically Significant Variables

VARIABLE	COMBINED DATASET – MARGINAL IMPACT ON LONG-TERM VOLUNTEER STATUS
spouse	-10%
Recent loss of pet	-13%
Master’s degree	+13%
Bachelor’s degree	+13%
Some college	+7%
Age 35-44	+9%
Age 55-64	+17%
student	-11%

The discussion below will largely focus on the results of the ordered probit models & z-scores rather than these marginal impacts; but as will be discussed, the marginal impacts provide a different way of looking at and understanding the data.

Discussion

The results show a clear message with regards to age: young adult volunteers are least likely to remain at LHS over time, while middle-aged volunteers are the most likely to remain. The specific ranges when people are most likely to ‘stick’ as LHS volunteers are 35-44 and 55-64, followed by 25-34 and 45-54. These findings support both David Horton Smith, who found that volunteering peaks in middle age;

and the writers of the Urban Institute study, who found that organizations with high numbers of volunteers 24 and under have significant turnover.

The positive significance of middle age on volunteer longevity is unsurprising, since it is in accordance with the literature. However, the significant effect of having recently lost a pet is not widely established or explored. People who lose a pet in the year before they begin volunteer service at LHS are significantly more likely to cease volunteering after a short time than those who did not lose a pet. Perhaps some individuals who recently lost their pets are consciously or unconsciously ‘shopping’ for their next animal companion. If this is the case, once a new animal comes into that person’s life, it is likely that they will no longer feel a need to volunteer. Alternatively, perhaps the contact with animals and new-pet adoptees brings back memories of their own pet and causes resurgence in grief, leading the individual to cease volunteering.

All three ordered probit models show that individuals with bachelor’s or master’s degrees are likely to volunteer longer than those with only high school degrees; unlike the database and combined models, the survey model finds the effect of having a bachelor’s or master’s to be insignificant. But because the database and combined models have considerably more bachelor’s and master’s entries than the survey model,²³ it is valid to say that having a bachelor’s or master’s degree does have a significant positive effect on volunteer longevity. Having some college also has a positive effect on volunteer longevity, as both the models that include the “some college” category show. These four educational categories – high school, some college, bachelor’s degree and master’s degree – were all relatively well represented in the data.²⁴ That strong representation further supports the conclusion that individuals with master’s degrees, bachelor’s degrees or some college are likely to volunteer longer than high school graduates.

The contradictory results in the doctoral category can be explained by the relatively small amount of data available on members of this group. Only four doctoral degree holders completed the survey, and two of those four were former volunteers. In this way, data from a very small number of people created the significant negative effect that we see in the survey model. Because it was derived

²³ Master’s: combined model has 64, database has 46, survey has 18. Bachelor’s: combined model has 186, database has 149, survey has 37.

²⁴ Representation across all datasets: 64 Master’s degree holders, 186 bachelor’s degree holders; 263 with some college; 50 high school grads.

from only four people, it is not valid to say that having a doctoral degree has a significant negative effect.

Twelve individuals with doctoral degrees were included in the database model, which found having a doctoral degree to have a significantly positive impact on volunteer longevity. The combined model used data from all sixteen doctoral graduates, and found that having a doctorate has an insignificantly positive effect on volunteer longevity. Because all three models use such a limited number of doctoral entries, it is safest to say that this study is inconclusive about the impact of having a doctorate on volunteer longevity. The same is true about individuals with some graduate school and associate's degrees: there are so few of them in the dataset that the models can't generate reliable results.²⁵

The positive impact of having dogs, working full-time, identifying as a political moderate and attending religious services once a year or less are significant only in the survey model; likewise, the negative effect of having friends or family serving as volunteers at LHS is significant in the survey model only. The strength of the survey is in its breadth, and the weakness is in its size – it measures a large number of variables in a relatively small pool of 107 people. The survey is also less comprehensive than the database and combined models in the scope of the dependent variable: long-term volunteers, short-term volunteers, and former volunteers were the only groups available for inclusion. Because of these limitations of the survey model, it is best to interpret these findings as factors that potentially influence volunteer longevity.

Having a spouse is a strong negative influence on volunteer longevity in the combined and database models; it has little effect in the survey model. These results don't lend themselves to the kind of clear, positive-effect conclusions we can draw about middle age or the clear, negative-effect ones about recent pet loss. But because the combined and database findings are very close to each other and strongly negative, it is reasonable to conclude that single volunteers are likely to serve longer than married ones.

According to the comprehensive and the database model, students are far less likely than non-students to become long-term volunteers. The survey model finds precisely the opposite: students are

²⁵ Representation across all datasets: 16 with doctoral degrees, 19 with associate's degrees, 8 with some grad school.

much more likely to stay for the long-term. This contradiction can be explained, in part, by the fact that different data is available in the different models.

All the former volunteers, short-term volunteers and long-term volunteers who took the survey answered a question about whether they were or were not a student. On the other hand, information from the database entries did not specify whether an individual was or was not a student, but some individuals chose “currently in school” as their educational status. So we know for certain that those people are students, but we don’t know for certain that the others are not students. To further complicate matters, over a hundred entries in the database do not have any information about educational or student status.

However, it is possible to get an accurate sense of how many students are in the groups with the most and least longevity. The individuals who received the long-term volunteer survey make up the bulk of the long-term volunteers in the database. Over half of those individuals responded to the survey, so it is fair to say they adequately represent the long-term volunteer demographic. Twenty-five percent of those long-term volunteers are full or part time students.

In the database, 45% of those who dropped out after orientation listed themselves as currently in school. Even if we assume that the rest of the orientee dropouts were not in school, students are strongly represented in this group. Comparing the percentage of student long term volunteers with the percentage of student orientee dropouts suggests that students are more likely than non-students to drop out during the orientation stage of the volunteer program.

The marginal impacts displayed in the second table are useful when trying to understand the effects of each significant variable in real terms. According to the marginal impacts, an individual with a spouse is 10% less likely to become a long term volunteer than an individual who is single. A person with a master’s or bachelor’s degree is 13% more likely to become a long-term volunteer than someone with a high-school diploma; a person with some college is 7% more likely to become a long-term volunteer than a high school graduate. Someone who has lost a pet is 13% less likely to become a long-term volunteer than someone who has not, and students are 11% less likely to become long-term volunteers than non-students. Finally, persons aged 35-44 are 9% more likely to become long-term volunteers than those 24 and under; persons aged 55-64 are 17% more likely to become long-term volunteers than the 24 and under group.

In other words, these marginal impacts and the ordered probit z-scores point to the same significant variables and thus the same results. The two calculations simply offer two different ways of looking at the data.²⁶

Limitations

One of the limitations of this study is that like many studies of ongoing programs, it is founded on a large but incomplete dataset. While working with the LHS database was a tremendous boon to this project, it did present the complications of analyzing a moving target. Because the database is constantly changing and being updated – last month’s short term volunteer may be this month’s long term volunteer or former volunteer – data recovery was not always possible, and tracking changes in volunteer status was an ongoing need.

The conclusions of this study not only rest on the quality of the data, but also on the quality of the ordered probit model. A model’s value increases as it accounts for more of the factors that have an effect on the dependent variable. While significant literature research and multiple reviews informed variable selection, the number of variables explored was limited by the desire to keep the survey within a certain length, and is possible that variables not tested in the survey or accounted for in the dataset effect volunteer longevity. Specifically, this study did not take personality traits into consideration, nor did it directly consider attitudinal variables such as levels of altruism, political empowerment and civic duty. A few social characteristics, such as race and sexual orientation, were also unexplored in this study.

Finally, there is an inherent uncertainty in some of the volunteer types – we don’t know if a short-term volunteer will drop out next week or serve for years, or whether an applicant or no-hour orientee will ever show up.

Recommendations

LHS attracts large numbers of would-be volunteers, and they form a diverse group. While this study identifies certain traits as indicators of volunteer longevity, those factors are not enough to accurately predict whether a given individual will become a long-term volunteer. For instance, 18-24 year olds on the whole are more likely to drop out of the program after orientation, but individuals in that age group can and do become valuable long-term volunteers. That said, there is no denying that

²⁶ Marginal impacts were calculated using results from combined dataset only.

significant numbers of people drop out early in the program, costing the organization resources. It is not in the best interests of the animals to pretend that all prospective volunteers are equal; a more focused approach demanding more at the beginning of the volunteer process stands to improve the program.

My recommendation to address this issue is to change the orientation process. Currently, the labor burden of moving a volunteer through the application and orientation process falls largely onto the LHS staff. I recommend that LHS move to a process that is more applicant-driven. For instance, instead of learning the LHS volunteer procedures at an in-person orientation, applicants could be required to learn about these via online readings, videos or tutorials. Then when applicants did report to the LHS facility for in-person training, that time could be greatly reduced, and perhaps restructured to a simple welcome and tour of the building. By making the process more applicant-driven, LHS would not only shift the labor burden away from their staff, but they would also create a mechanism to gently weed out applicants who are not seriously ready to volunteer.

This study suggests that those who are seriously ready to volunteer are almost all driven by the desire to act on or express their values. I recommend that LHS use this knowledge to their advantage to pique the interest of potential volunteers and reinforce the motivation of ongoing ones. For instance, a billboard featuring a values-centered line like, “At LHS, you can help save the world one animal at a time” or “Making animals’ lives better is what I do’ – Karen X, Volunteer” would probably be more effective at attracting new volunteers than one with a career-building theme.

I also recommend that LHS take steps to retain more of the incoming volunteers who recently lost their pets. If individuals are dropping out because they find it painful to be around animals on the heels of their loss, perhaps LHS can help these individuals find a way to ease their pain and continue to volunteer. Speaking as a volunteer, I was motivated to begin volunteering after a rescue kitten came into my life for a few special weeks and then succumbed to a pre-existing condition. I see my volunteering in part as a tribute to her. It’s a way to give other animals the healthy start she didn’t have before they find homes where they can give their owners the joy this kitten gave to me. If incoming volunteers could be encouraged to see their service as a way of carrying on their pet’s legacy, it might boost retention among those who have recently suffered that loss.

Finally, bearing in mind that there is no sure way to predict volunteer longevity, LHS might nonetheless boost incoming applications and volunteer retention by making a special effort to raise their profile among certain demographics. Because such a huge proportion of the volunteer pool is

comprised of middle-aged, child-free female pet-owners, an LHS donation bank or volunteer poster is likely to get more attention at a place that attracts large numbers of this demographic – for example, a pet boutique.

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Appendix A – Current Volunteer Survey

1. What is your gender?

- FEMALE
- MALE

2. What is your age range?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

3. What is your zip code?

4. What is the highest level of education you have completed?

- SOME HIGH SCHOOL
- HIGH SCHOOL
- VOCATIONAL OR TRADE SCHOOL
- SOME COLLEGE
- BACHELOR'S DEGREE
- SOME GRADUATE SCHOOL
- MASTER'S DEGREE
- DOCTORAL OR PROFESSIONAL (MD, JD, ETC.) DEGREE

5. Are you currently a student?

- YES, FULL TIME STUDENT
- YES, PART TIME STUDENT
- NO

6. Are you currently working for pay?

- YES, FULL TIME
- YES, PART TIME
- NO

7. Do you live with a spouse or partner?

- YES
- NO

8. How many adults (18 years or older) live in your house, including you?

- 1
- 2
- 3
- 4
- 5 or more

9. How many children (0-17 years) live in your household?

- 0
- 1
- 2
- 3
- 4
- 5 or more

10. What is your annual household income range?

- \$0-15,000
- \$15,001-25,000
- \$25,001-35,000
- \$35,001-50,000
- \$50,001-75,000
- \$75,001-100,000
- over \$100,000

11. Do you currently have pets?

- YES
- NO²⁷

12. How many of each type of pet?

	0	1	2	3	4 or more
dogs	<input type="checkbox"/>				
cats	<input type="checkbox"/>				
reptiles (lizards, snakes, turtles, etc.)	<input type="checkbox"/>				
horses	<input type="checkbox"/>				
rabbits and/or ferrets	<input type="checkbox"/>				
birds	<input type="checkbox"/>				
rodents (hamster, guinea pig, gerbil, etc.)	<input type="checkbox"/>				
fish	<input type="checkbox"/>				

Optional: If you have any other kind of pets not listed, please list what kind and how many.

13. Did you experience the loss of a pet during the year before you signed up to volunteer at LHS?

- YES
- NO

14. When you were growing up, did you have pets in your household?

- YES
- NO

15. Were you responsible for helping to take care of any of the pets? (example: feeding, exercising, cleaning up after)

- YES
- NO

²⁷ If respondent answers no, survey will automatically skip to question 13.

Previous research in other parts of the country has shown that people who volunteer with animals sometimes share similar religious or political beliefs. We are asking the following four questions about your religious/political beliefs to try and find out whether this is true in Lexington.

16. How would you describe your political beliefs?

- LIBERAL
- MODERATE
- CONSERVATIVE
- NOT INTERESTED IN POLITICS
- OTHER

If you would like to clarify your answer, you may do so here.

17. The term “feminist” means somewhat different things to different people. Think for a moment about how you define the term. Based on your own definition, do you consider yourself to be a feminist?

- YES
- NO
- NOT SURE

If you would like to clarify your answer, you may do so here.

18. On average, how often do you attend religious services?

- NEVER
- ONCE A YEAR OR LESS
- 2-10 TIMES PER YEAR
- 1-3 TIMES PER MONTH
- ONCE A WEEK
- MORE THAN ONCE A WEEK

19. Please choose the term that best describes your religious beliefs.

- PROTESTANT CHRISTIAN
- CATHOLIC CHRISTIAN
- JEWISH
- MUSLIM

- MEMBER OF OTHER ORGANIZED RELIGION (please list below)
- SPIRITUAL
- UNCERTAIN
- NOT RELIGIOUS
- OTHER

If you would like to clarify your answer, you may do so here.

20. Aside from Lexington Humane Society, do you regularly (at least once a month) volunteer with other philanthropic, religious, or social organizations (for example, civic organization, food bank, church, political party)?

- YES
- NO²⁸

21. What type of organization(s)? Please check all that apply.

- OTHER ANIMAL ORGANIZATION
- RELIGIOUS ORGANIZATION
- EDUCATIONAL ORGANIZATION
- CIVIC ORGANIZATION
- POLITICAL ORGANIZATION
- OTHER HUMAN SERVICES OR CHARITABLE ORGANIZATION
- OTHER

Optional: If you would like to list the organization(s), you may do so here.

22. Did anyone 'recruit' you, or ask you to begin volunteering at LHS?

- YES
- NO

23. Before you started volunteering at LHS, had you ever adopted a pet from LHS?

- YES
- NO

²⁸ If respondent answers no, survey will automatically skip to question 22.

24. Before you started volunteering at LHS, did you have any friends or family members that were already volunteering there?

- YES
- NO

25. Was there a specific event that prompted or inspired you to begin volunteering at LHS?

- YES
- NO²⁹

26. What kind of event prompted you to begin volunteering?

- SOMETHING THAT HAPPENED TO ME PERSONALLY
- SOMETHING THAT HAPPENED TO SOMEONE I KNOW
- SOMETHING I SAW AND/OR READ IN MEDIA, ADVERTISEMENTS OR ELSEWHERE
- OTHER

Optional: If you'd like to describe the event, you may do so here.

27. Do you donate financially to LHS?

- YES
- NO³⁰

28. How often do you donate to LHS?

- MONTHLY
- QUARTERLY
- ANNUALLY
- OTHER SCHEDULED INTERVAL
- I DON'T HAVE A SET DONATION SCHEDULE
- I'M NOT SURE

²⁹ If respondent answers no, survey will automatically skip to question 27.

³⁰ If respondent answers no, survey will automatically skip to question 30.

29. How do you make your donations? Please check all that apply.

- ONLINE
- IN PERSON
- BY MAIL, USING A DONATION ENVELOPE FROM LHS
- BY MAIL, USING A REGULAR ENVELOPE

30. Which of the following statements describes your ongoing motivation to volunteer at LHS? Please check all that apply. Volunteering at LHS allows me to...³¹

- GROW AND DEVELOP PSYCHOLOGICALLY
- EXPRESS OR ACT ON VALUES THAT ARE IMPORTANT TO ME
- LEARN AND EXERCISE NEW AND/OR DIFFERENT SKILLS
- BUILD AND STRENGTHEN SOCIAL RELATIONSHIPS
- GAIN CAREER-RELATED EXPERIENCE
- REDUCE NEGATIVE FEELINGS AND FEEL BETTER ABOUT MY OWN PROBLEMS

If you want to give specifics, you may do so here.

31. What, if any, changes could LHS make to improve your volunteer experience?

32. Optional: If you would like to make any other comments about LHS, the volunteer program, or this study, please do so here.

Appendix B – Former Volunteer Survey

1. What is your gender?

- FEMALE
- MALE

2. What is your age range?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

3. What is your zip code?

4. What is the highest level of education you have completed?

- SOME HIGH SCHOOL
- HIGH SCHOOL
- VOCATIONAL OR TRADE SCHOOL
- SOME COLLEGE
- BACHELOR'S DEGREE
- SOME GRADUATE SCHOOL
- MASTER'S DEGREE
- DOCTORAL OR PROFESSIONAL (MD, JD, ETC.) DEGREE

5. Are you currently a student?

- YES, FULL TIME STUDENT
- YES, PART TIME STUDENT
- NO

6. Are you currently working for pay?

- YES, FULL TIME
- YES, PART TIME
- NO

7. Do you live with a spouse or partner?

- YES
- NO

8. How many adults (18 years or older) live in your house, including you?

- 1
- 2
- 3
- 4
- 5 or more

9. How many children (0-17 years) live in your household?

- 0
- 1
- 2
- 3
- 4
- 5 or more

10. What is your annual household income range?

- \$0-15,000
- \$15,001-25,000
- \$25,001-35,000
- \$35,001-50,000
- \$50,001-75,000
- \$75,001-100,000
- over \$100,000

11. Do you currently have pets?

- YES
- NO³²

12. How many of each type of pet?

	0	1	2	3	4 or more
dogs	<input type="checkbox"/>				
cats	<input type="checkbox"/>				
reptiles (lizards, snakes, turtles, etc.)	<input type="checkbox"/>				
horses	<input type="checkbox"/>				
rabbits and/or ferrets	<input type="checkbox"/>				
birds	<input type="checkbox"/>				
rodents (hamster, guinea pig, gerbil, etc.)	<input type="checkbox"/>				
fish	<input type="checkbox"/>				

Optional: If you have any other kind of pets not listed, please list what kind and how many.

13. Did you experience the loss of a pet during the year before you signed up to volunteer at LHS?

- YES
- NO

14. When you were growing up, did you have pets in your household?

- YES
- NO

15. Were you responsible for helping to take care of any of the pets? (example: feeding, exercising, cleaning up after)

- YES
- NO

³² If respondent answers no, survey will automatically skip to question 13.

Previous research in other parts of the country has shown that people who volunteer with animals sometimes share similar religious or political beliefs. We are asking the following four questions about your religious/political beliefs to try and find out whether this is true in Lexington.

16. How would you describe your political beliefs?

- LIBERAL
- MODERATE
- CONSERVATIVE
- NOT INTERESTED IN POLITICS
- OTHER

If you would like to clarify your answer, you may do so here.

17. The term “feminist” means somewhat different things to different people. Think for a moment about how you define the term. Based on your own definition, do you consider yourself to be a feminist?

- YES
- NO
- NOT SURE

If you would like to clarify your answer, you may do so here.

18. On average, how often do you attend religious services?

- NEVER
- ONCE A YEAR OR LESS
- 2-10 TIMES PER YEAR
- 1-3 TIMES PER MONTH
- ONCE A WEEK
- MORE THAN ONCE A WEEK

19. Please choose the term that best describes your religious beliefs.

- PROTESTANT CHRISTIAN
- CATHOLIC CHRISTIAN
- JEWISH
- MUSLIM

- MEMBER OF OTHER ORGANIZED RELIGION (please list below)
- SPIRITUAL
- UNCERTAIN
- NOT RELIGIOUS
- OTHER

If you would like to clarify your answer, you may do so here.

20. At the present time, do you regularly (at least once a month) volunteer with other philanthropic, religious, or social organizations (for example, civic organization, food bank, church, political party)?

- YES
- NO³³

21. What type of organization(s)? Please check all that apply.

- OTHER ANIMAL ORGANIZATION
- RELIGIOUS ORGANIZATION
- EDUCATIONAL ORGANIZATION
- CIVIC ORGANIZATION
- POLITICAL ORGANIZATION
- OTHER HUMAN SERVICES OR CHARITABLE ORGANIZATION
- OTHER

Optional: If you would like to list the organization(s), you may do so here.

22. Did anyone 'recruit' you, or ask you to begin volunteering at LHS?

- YES
- NO

23. Before you started volunteering at LHS, had you ever adopted a pet from LHS?

- YES
- NO

³³ If respondent answers no, survey will automatically skip to question 22.

24. Before you started volunteering at LHS, did you have any friends or family members that were already volunteering there?

- YES
- NO

25. Was there a specific event that prompted or inspired you to begin volunteering at LHS?

- YES
- NO³⁴

26. What kind of event prompted you to begin volunteering?

- SOMETHING THAT HAPPENED TO ME PERSONALLY
- SOMETHING THAT HAPPENED TO SOMEONE I KNOW
- SOMETHING I SAW AND/OR READ IN MEDIA, ADVERTISEMENTS OR ELSEWHERE
- OTHER

Optional: If you'd like to describe the event, you may do so here.

27. Do you donate financially to LHS?

- YES
- NO³⁵

28. How often do you donate to LHS?

- MONTHLY
- QUARTERLY
- ANNUALLY
- OTHER SCHEDULED INTERVAL
- I DON'T HAVE A SET DONATION SCHEDULE
- I'M NOT SURE

³⁴ If respondent answers no, survey will automatically skip to question 27.

³⁵ If respondent answers no, survey will automatically skip to question 30.

29. How do you make your donations? Please check all that apply.

- ONLINE
- IN PERSON
- BY MAIL, USING A DONATION ENVELOPE FROM LHS
- BY MAIL, USING A REGULAR ENVELOPE

30. Why are you no longer active as an LHS volunteer? Please check all that apply. ³⁶

- DID NOT HAVE TIME TO VOLUNTEER
- FELT THAT MY EFFORTS WERE GOING UNRECOGNIZED
- DID NOT GET SENSE OF SATISFACTION
- DID NOT ENJOY VOLUNTEER TASKS
- VOLUNTEER PROGRAM WAS NOT WHAT I EXPECTED
- OTHER
- NEGATIVE ISSUES WITH STAFF AND/OR OTHER VOLUNTEERS

If you want to give specifics, you may do so here.

31. What, if any, changes could LHS have made to improve your volunteer experience?

32. Optional: If you would like to make any other comments about LHS, the volunteer program, or this study, please do so here.

³⁶ Survey tool (Survey Monkey) will put the 7 answer choices into random order on each survey.

Appendix C – Ordered Probit Estimates

Dependent variable: ordered categories of volunteers from no service to more than one year.

Coefficients estimate effects on the propensity to volunteer and serve longer.

Survey data include many explanatory variables not available in the administrative data.

	Administrative & survey data (n=581)				Administrative data (n=493)				Survey data (n=88)			
	Coef.	Std. Err.	z	p-value	Coef.	Std. Err.	z	p-value	Coef.	Std. Err.	z	p-value
female	0.1569	0.1160	1.35	0.176	0.1438	0.1197	1.20	0.230	0.7602	0.6612	1.15	0.250
spouse	0.4855	0.1383	-3.15	0.000	-0.5244	0.1489	-3.52	0.000	0.2678	0.4753	0.56	0.573
number of adults	0.0126	0.1892	-0.07	0.947	(omitted)				-0.3326	0.2501	-1.33	0.184
number of children	0.0570	0.2338	0.24	0.807	(omitted)				-0.2646	0.3065	-0.86	0.388
number of dogs	0.0142	0.0547	-0.26	0.795	-0.0547	0.0596	-0.92	0.359	0.4116	0.1866	2.21	0.027
number of cats	0.0330	0.0519	0.63	0.526	0.0386	0.0560	0.69	0.491	-0.0718	0.1893	-0.38	0.704
feminist	0.2996	0.3624	0.83	0.408	(omitted)				0.5184	0.5257	0.99	0.324
loss responsible for pet growing up	0.6034	0.3615	-1.67	0.095	(omitted)				-0.8078	0.4883	-1.65	0.098
attend church 0	0.1098	0.3582	0.31	0.759	(omitted)				0.3060	0.4933	0.62	0.535
attend 1/year	0.5608	0.4256	1.32	0.188	(omitted)				0.3817	0.4885	0.78	0.435
attend 52+/year	0.1301	0.4647	0.28	0.779	(omitted)				0.9148	0.5322	1.72	0.086
educ/doctoral/prof	0.5052	0.3297	1.53	0.125	0.7822	0.3610	2.17	0.030	0.0970	0.6016	0.16	0.872
educ/associates	0.0191	0.2938	-0.06	0.948	-0.0042	0.2942	-0.01	0.989	(no one had this level of education)			
educ/masters	0.6364	0.2272	2.80	0.005	0.5892	0.2337	2.52	0.012	0.0118	0.6985	0.02	0.986
educ/some college	0.3372	0.1808	1.86	0.062	0.4076	0.1832	2.23	0.026	(no one had this level of education)			
educ/some grad	0.2007	0.5312	0.38	0.706	(omitted)				-0.3932	0.6957	-0.57	0.572
educ/bachelor's	0.6230	0.1829	3.41	0.001	0.6117	0.1841	3.32	0.001	0.5269	0.5740	0.92	0.359
income, \$	0.0000	0.0000	0.85	0.395	(omitted)				0.0000	0.0000	1.12	0.263
age2534	0.1199	0.1364	0.88	0.379	0.0865	0.1408	0.61	0.539	0.6978	0.6571	1.06	0.288
age3544	0.4104	0.1619	2.53	0.011	0.3632	0.1676	2.17	0.030	1.7847	0.9022	1.98	0.048
age4554	0.1630	0.2069	0.79	0.431	0.3459	0.2289	1.51	0.131	0.0057	0.7838	0.01	0.994
age5564	0.8076	0.2193	3.68	0.000	0.8172	0.2347	3.48	0.000	1.9381	0.9689	2.00	0.045
age65	0.2892	0.4755	0.61	0.543	0.1693	0.4959	0.34	0.733	4.5470	#####	0.02	0.988
conservative	0.3902	0.5036	-0.77	0.438	(omitted)				0.1735	0.6365	0.27	0.785
liberal	0.3871	0.5005	0.77	0.439	(omitted)				0.5247	0.6604	0.79	0.427
moderate	0.3448	0.4657	0.74	0.459	(omitted)				1.3288	0.5954	2.23	0.026
student	0.5004	0.1383	-3.62	0.000	-0.6524	0.1471	-4.43	0.000	1.8756	0.7796	2.41	0.016
full time work	0.1216	0.3320	0.37	0.714	(omitted)				1.2645	0.5834	2.17	0.030
part time work	0.1670	0.4446	0.38	0.707	(omitted)				-0.0135	0.5648	-0.02	0.981
vol elsewhere	0.3900	0.3276	-1.19	0.234	(omitted)				-0.7201	0.4469	-1.61	0.107
recruited	0.0756	0.8229	-0.09	0.927	(omitted)				0.4202	1.0447	0.40	0.688
adopted a pet	0.2991	0.3797	0.79	0.431	(omitted)				0.4952	0.5662	0.87	0.382
friendfam	0.4638	0.4324	-1.07	0.283	(omitted)				-0.9654	0.5550	-1.74	0.082
came to event	0.2220	0.3806	-0.58	0.560	(omitted)				0.0384	0.4960	0.08	0.938

survey data	0.7134	0.6563	1.09	0.277	-----	-----	-----	-----
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Cut points show estimated levels of the propensity at which transitions to higher service occur.

cut 1	1.2090	0.2012	-1.2514	0.2033	1.8146	1.3898
cut 2	0.1113	0.1882	-0.1260	0.1901	4.1750	1.4409
cut 3	0.0791	0.1876	0.0714	0.1894		
cut 4	0.5766	0.1888	0.5506	0.1907		
cut 5	1.7493	0.1989	1.6486	0.2011		

