

Executive Summary

Prepared for the North Carolina Association of Fire Chiefs (NCAFC) in partnership with the International Association of Fire Chiefs (IAFC) and the Volunteer Work Force Solutions (VWFS) group.

- A survey was created and distributed by the North Carolina Association of Fire Chiefs (NCAFC) in partnership with the International Association of Fire Chiefs (IAFC) and the Volunteer Work Force Solutions (VWFS) group.
- The purpose for the survey was to get a sampling of beliefs from firefighters as they pertain to both recruitment and retention of fellow firefighters in the state of North Carolina.
- There were a total of 886 responses and 885 total respondents who participated the survey.
 - The 885 respondents included 234 who indicated they were career firefighters, 402 who indicated they were volunteer firefighters, and 249 who listed themselves both career and volunteer. 132 respondents did not classify themselves.
- The question “do you feel that negative leadership issues exist in your department” had non-response rates of 59% (volunteer), 42% (career), and 47% (both). These non-response rates in two of the three groups (career and volunteer) were nearly double the non-response rates of any other question in the survey.
- As to why respondents initially became firefighters all three categories (volunteer, both and career), the most commonly chosen answer was service to my community.
- The most effective method for recruiting firefighters as noted by all three groups (volunteer, both and career) was Fire Station/Open House”.
 - Those with fewer years in service indicated Facebook was more important than either fundraising events or word of mouth.
 - When analyzed by age of respondent, those who were younger indicated Facebook was important. Those who were older indicated word of mouth was more important.
- Personal contact was prevalent across all categories in regard to recruitment: volunteer, career and both. Additionally, personal contact was important to all groups even when looked at by age and years of service. Emedia such as Facebook, Twitter, websites and the often mentioned Instagram in the “other” categories were especially important for new members and for those who were of a young age.
- When questioned about the primary motivation for continuing as a firefighter, respondents from all three categories agreed that service to their community was the primary reason. This trend was noted regardless of age or years of service.
- Respondents from all three groups identified communication, motivating personnel, recruitment, retention and leadership as areas in which their departments needed to improve.
- Future recommendations for improving recruitment include:
 - Taking advantage of 100 high school fire/public safety academies by using both personal contact and emedia.
 - Encourage fire departments to focus recruitment efforts on activities that involve personal contact.

Survey Analysis for the North Carolina Association of Fire Chiefs

APRIL 2019

PREPARED BY:

JEFFREY KIMBLE

ASSOCIATE PROFESSOR

FIRE SAFETY ENGINEERING TECHNOLOGY

THE UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE

XINGNAN ZHANG

MAJOR: APPLIED MATHEMATICS

DOCTOR OF PHILOSOPHY STUDENT

TRISHA M. CLARKE

MAJOR: FIRE SAFETY ENGINEERING TECHNOLOGY

BACHELOR OF SCIENCE STUDENT

Table of Contents

Background and Overview	2
Nature of the Survey Questions and Potential Analytical Methods	3
Response Rates	3
Descriptive Statistics	6
Statistical Analysis	19
Recommendations	22
Appendix	24

List of Figures

Figure 1: Response Rates by Region	4
Figure 2: Percentage of Non-Responses Based On Question Number	5
Figure 3: Responses by Rank.....	6
Figure 4: Distance to Department vs. Distance to Job - Volunteer.....	8
Figure 5: How Did You Learn About the Opportunity to Become a Firefighter	9
Figure 6: Primary Motivation for Becoming a Firefighter – Volunteer.....	10
Figure 7: Primary Motivation for Becoming a Firefighter – Both	11
Figure 8: Primary Motivation for Becoming a Firefighter – Career	11
Figure 9: Fire Station/Open House Recruitment	12
Figure 10: What Retention Methods Does Your Department Use – Volunteer	13
Figure 11: What Retention Methods Does Your Department Use – Both.....	14
Figure 12: What Retention Methods Does Your Department Use – Career.....	15
Figure 13: Does Your Department Conduct Exit Interviews - All	16
Figure 14: Do Negative Leadership Issues Exist Your Department. - Career	17
Figure 15: At What Level Do Negative Leadership Issues Exist Your Department.	17
Figure 16: In Which Areas Does Your Department Need Improvement.	18

List of Tables

Table 1: Summary of Survey Responses by Category	4
Table 2: Responses by Years of Service	7
Table 3: Age Data Summary.....	7

Background and Overview

A survey was created and distributed by the North Carolina Association of Fire Chiefs (NCAFC) in partnership with the International Association of Fire Chiefs (IAFC) and the Volunteer Work Force Solutions (VWFS) group. The purpose for the survey was to get a sampling of beliefs from firefighters as they pertain to both recruitment and retention of fellow firefighters in the state of North Carolina. The survey is part of a larger project on recruitment and retention funded by an Assistance to Firefighters Grant awarded to the NCAFC in 2018. The survey was reviewed by multiple groups before being distributed. The survey was made available through the online survey system, Survey Monkey, and via a paper form if requested.

The survey asked a series of questions of the firefighters in several broad categories:

- Firefighter type with responses being limited to career, volunteer or both
- Primary occupation, years of service, and some general demographic information
- Primary motivation for joining the fire department
- How they initially became aware of the opportunity to join the fire department
- The effectiveness of social media for recruitment efforts
- Their motivation for continuing in the fire service
- Their belief in why others may have left the fire service

The survey data were collected and provided to the analysts who reviewed the data and generated this report.

There were a total of 886 responses and 885 total respondents who participated the survey. The discrepancy in the number of responses/respondents is due to the fact that one user completed surveys for both career and volunteer rather than selecting the category of “both” for their survey. The 885 respondents included 234 who indicated they were career firefighters, 402 who indicated they were volunteer firefighters, and 249 who listed themselves both career and volunteer. 132 respondents did not classify themselves. The answers to some of the questions were not mutually exclusive, and in twelve instances, the respondents had the opportunity to choose multiple responses or in one case rate the effectiveness a retention method. In addition, for some questions, the responders were given the option of answering “N/A” or “Not applicable”, or they had the option to leave questions blank. In these cases, the analysts removed the responses from the analyses of individual questions. In some questions the responses were open ended, allowing the respondent to provide their own answer. The analysts made attempts to try and categorize the answers when there were logical reasons to do so. For example, the question that asked “what do you believe is the most effective ways to recruit firefighters?” generated open ended responses that included mentions of Instagram, Twitter, Facebook, etc. In instances such as these, similar responses were all categorized.

Additionally, there were many questions that had numerous choices for possible responses, in some case 10 or more options. The analysts chose to detail only the most frequently cited answers for these questions, particularly when there were obvious trends in the answers selected. The entirety of the responses for the open ended questions are provided in tables in the appendix and detailed by question number.

It is normal in surveys of this nature to have at least a few questions where not everyone answers every question. These non-answered questions are referred to as blanks or non-responses. This tendency to

skip a question could be for myriad reasons but often it is simply because the respondent believes an answer does not fit their particular situation. Another reason can be that the respondent has some trepidation or fear that the survey may not be completely anonymous and their response may somehow be attributed back to them. As previously mentioned, a few non-response answers are not uncommon, however, one question in this survey had an abnormally high non-response rate. Question #24 “Do you feel that negative leadership issues exist in your department” had non-response rates of 59% (volunteer), 42% (career), and 47% (both). These non-response rates in two of the three groups (career and volunteer) were nearly double the non-response rates of any other question in the survey. The reason this question produced so many non-responses is open to speculation as there are no data to support any rationale for the non-response rate.

Nature of the Survey Questions and Potential Analytical Methods

The majority of the questions used in the survey were questions where the respondent could only choose one answer (e.g. what is your current rank, do you feel there are negative leadership issues). Questions of this nature allow the answers to be categorized, and thus are known as categorical questions. Categorical data are best analyzed and described with statistics that are either descriptive or correlative. The majority of the following data analysis report contains descriptive statistics as the analysts believe this approach results in a presentation of the data that should prove valuable and help the reader understand the survey data.

Descriptive statistics describe or portray the observed data in simple to understand graphs or charts. This usually includes summary counts, frequency distributions and histograms. Descriptive statistics also portray central tendencies such as means, medians and modes. Descriptive statistics can be used to show some variability such as standard deviation. Descriptive statistics are a summary of the sample and the observations about the data. Descriptive statistics only represent the observed data and do not imply any inferences about the population the sample is thought to represent

The correlative analysis is limited to comparing pairs of variables using cross tabulations and Chi-square tests for independence between the variables. Additionally, logistical regression was used to establish the relationship, if any, between variables and note if the relationship was significant.

And finally a percentage analysis or a Relative Importance Analysis was conducted. The goal of this analyses is to partition explained variance among multiple predictors to better understand the role played by each predictor in a regression equation. While a relative importance analysis can answer the question of whether variable A is more important than B and if so, how much more important, the analysis cannot determine this for specific categories of respondents. In a relative importance analysis, if A has a computed value of 0.3577 and B has a computed value of 0.1108, we can say A is 3 times more important than B. This percentage analysis, similar to other statistical analysis has of confidence interval of 95%.

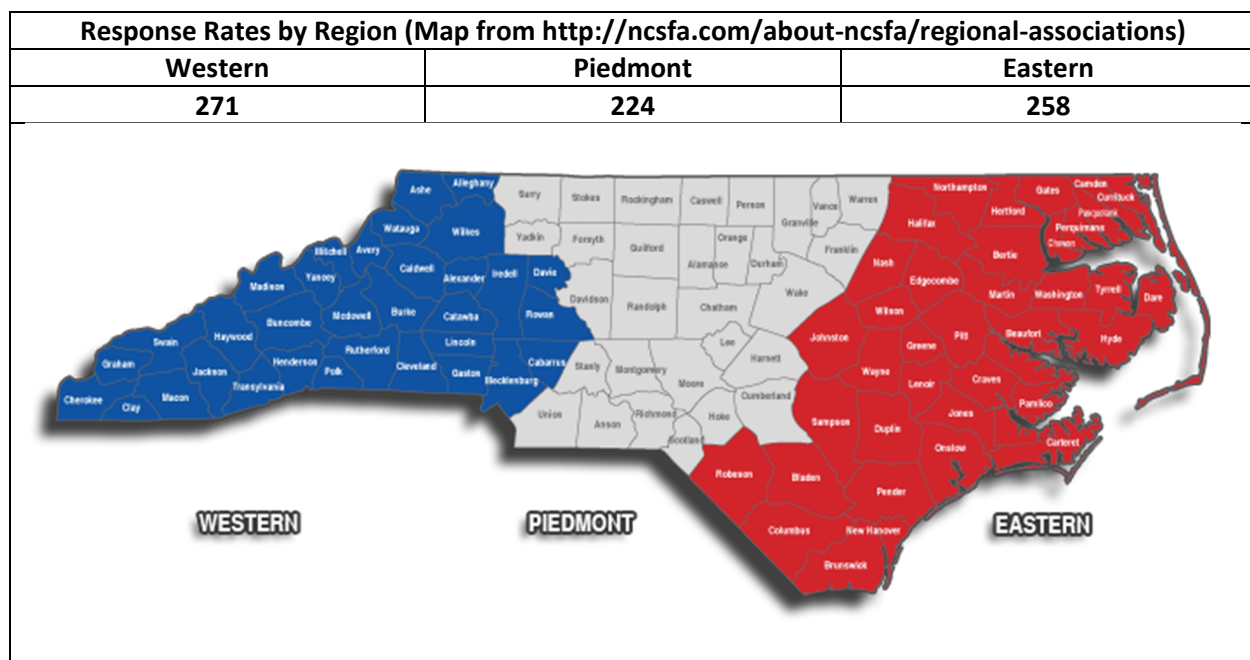
Response Rates

The survey began with a question to establish the type of firefighter the respondent categorized themselves as, with the choices being: volunteer, career or both. Based on the response by a survey participant, the online survey then loaded the appropriate question set for the respondent. Those who responded “volunteer” or both began with question #2. The questions for volunteers and both ranged from #2 – #30. Those who responded as career were directed to question #31 and were given questions

numbered up to 55. All groups were asked identical sets of questions with a few exceptions. These exceptions include career respondents not being asked their primary occupation. Additionally, career respondents were not asked how many months it took to become a member after submitting an application or the time to become an IDLH certified firefighter.

As mentioned in the Background and Overview Section, there were 885 responses. Table 1 provides information on the number of responses and non-responses by category. Figure 1 shows the responses based on the three regions as delineated by the North Carolina Firefighter's Association. Response rates were similar across the three regions.

	% of Survey Population	Total Respondents	Non-responses
Volunteer	43%	325	77
Career	28%	210	24
Both	29%	218	31
Total	100%	753	132
% of Total Population			



The number of non-responses or blanks tended to increase as the survey progressed as shown in Figure 2. A trend line, inserted onto this figure, illustrates the increase in the number of non-responses as the survey progressed. This is most likely due to the number of questions in the survey and the respondents growing tired of answering questions (survey fatigue). As mentioned previously, question #24 which asks about leadership issues had the highest non-response rate of any question in the survey.

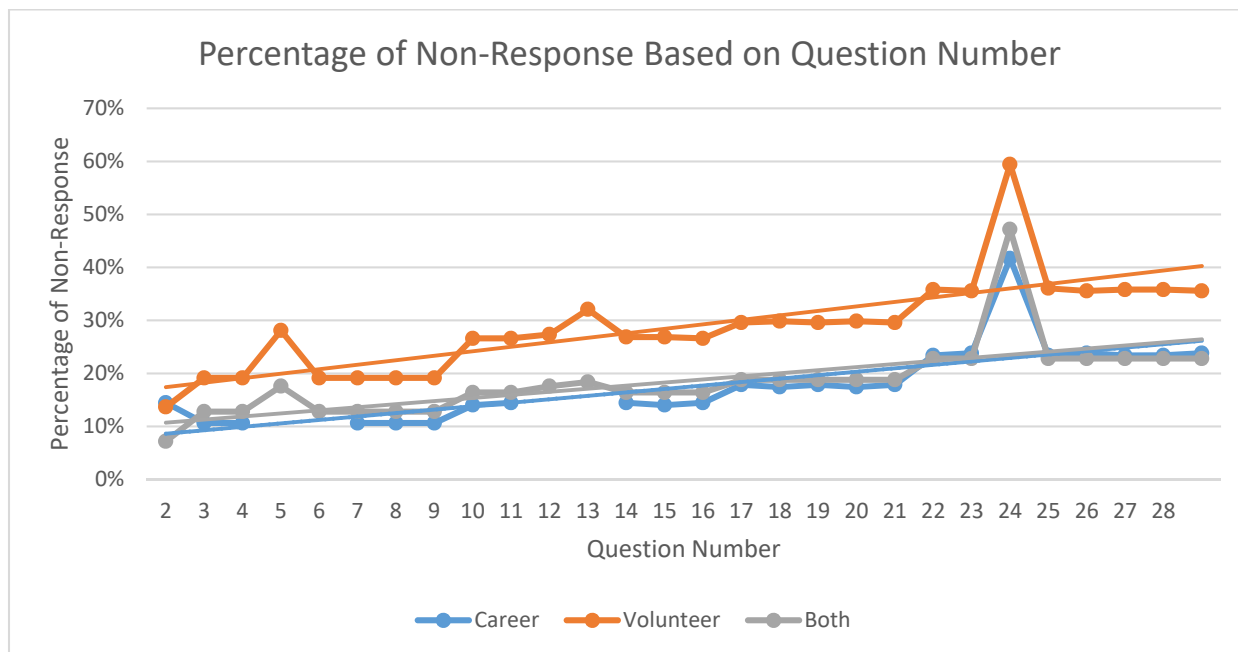


Figure 2: Percentage of Non-Responses Based On Question Number

When the responses are grouped by rank, it is noted that there is some dissimilarity in the distribution of respondents. Figure 3 illustrates this dissimilarity in responses. In the category of **volunteer**, 143 respondents (44%) are at the rank of firefighter and the remaining 145 responses (45%) consist of respondents who are officers. In this instance the number of responses by firefighters is nearly equal to the number of responses by the total number who responded that they are officers. In the category of **both**, of the 218 total respondents, 143 (66%) indicated they were officers and 65 (30%) indicated they were firefighters.

In contrast, the responses in the **career** category have a noticeably higher response rate by officers rather than firefighters. In the career category 151 of the 210 total responses (72%) were by those who indicated they were officers while only 42 (20%) indicated they were firefighters. The respondents ranked as chief account for the largest number of responses at 57 (27%). The total number of responses by those ranked as chief is larger than the total number of responses by those ranked as firefighters with 42 (20%). This is unique as there typically are more firefighters than chiefs. This discrepancy in response numbers could be attributed to the fact the chief (or other officer) in the career category may have handled the survey correspondence. Thus, the chief could have responded to the survey personally and did not make the subordinate officers or firefighters aware of the survey.

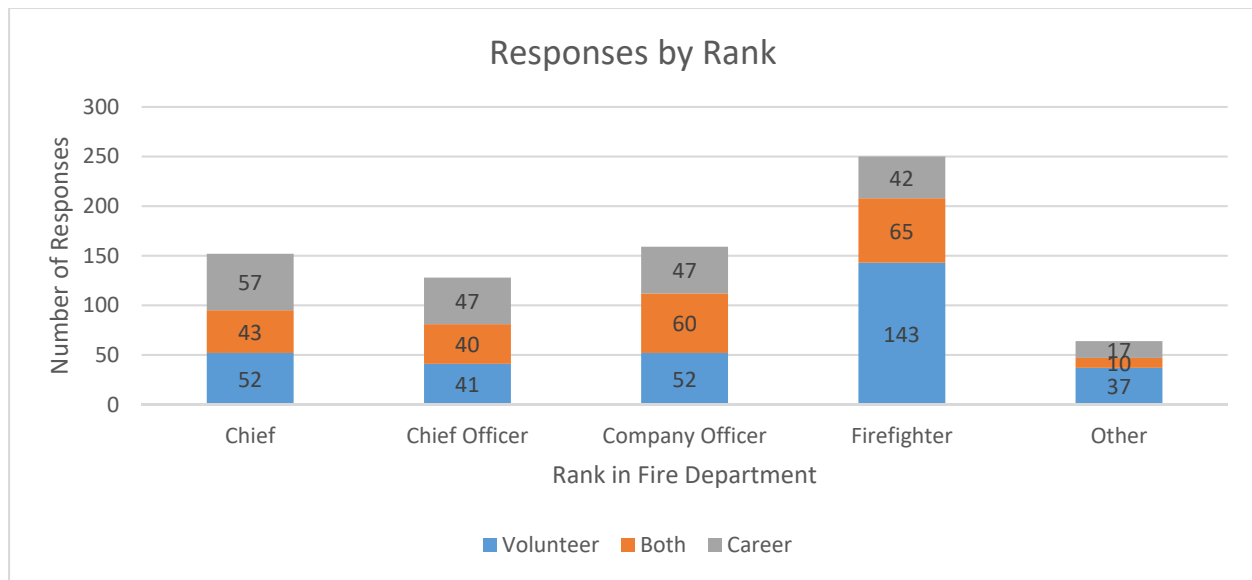


Figure 3: Responses by Rank

Descriptive Statistics

In the group identifying as volunteers, the highest number of responses 82 (25%) came from the group who indicated they had 30+ years of service (See Table 2). This high number is somewhat attributed to the fact that the volunteer group has personnel serving well into the latter stages of their lives. The age range for volunteers detailed ages from 15 to 79 years old. The average age for those with 30+ years was 58 years. Additionally, a single category such as 30+ years takes in a broad scope of answers whereas the other categories are broken down into five year increments. This accounts for, to some degree, the high number of responses. However, the information within the responses still make this category important. The survey did not ask if the years of service was with their current department or combined years with different departments or any question of similar nature. Without information such as this, it is not possible to tell whether departments have an established longevity with their members or if the 30+ years of service is due to other factors. There are several scenarios which could contribute to 30+ years, including the aforementioned longevity with the specific department or other circumstances such as current respondents indicating they are now volunteers after retiring from a career department.

Table 2: Responses by Years of Service

	Years of Service						
	0-5 Years	6-10 Years	11-15 Years	16-20 Years	20-25 Years	26-30 Years	30+ Years
Volunteer	64	40	40	37	33	29	82
Career	9	23	20	30	30	35	62
Both	13	39	35	41	31	31	28
Total	86	102	95	108	94	95	172
% of Total Population	11%	14%	13%	14%	13%	13%	23%
Average Age- Service Sector	32	33	36	40	45	48	58

The age data of respondents is summarized in Table 3. It is noted that the career category had three respondents indicate they were 65+ years of age with at least one response indicating they were 76 years old at the time of the survey. Having personnel in a career department over the age of 65 is somewhat anomalous based on this survey data. However, the volunteer category had 18 respondents indicate they were 65+ years of age.

Table 3: Age Data Summary

Age Data Summary			
	Average Age	Median Age	Age Range
Volunteer	45	46	15-79
Career	44	44	19-76
Both	39	43	19-72

Question 5 asked the respondents to indicate how far away they lived from their department (see Figure 4). In the volunteer category, of the 325 responses to this question, 268 (82%) respondents indicated they lived less than five miles from their department, 46 (14%) indicated they lived between five and ten miles from their department and 11 (4%) respondents indicated they lived greater than ten miles from their department. An assumption can be made that either volunteers tend to live near their volunteer department or the greater the distance to the department the less likely they are to volunteer.

In contrast, volunteers have to travel greater distances to their work. Of the 289 responses to this question, only 67 (23%) indicated they worked within five miles of their department, while 71 (24%) work within five to ten miles from their department and 151 (52%) work greater than ten miles from their department. This data support anecdotal references to volunteer departments typically being short

staffed during the normal workday. Similar data were reported for the category of both. The question of distance from home to the department had 325 responses and the question of distance from job to department had 268 responses. The difference in response numbers is attributed to the fact many volunteers responded they were retired so the distance from their job to the department was not applicable to that group.

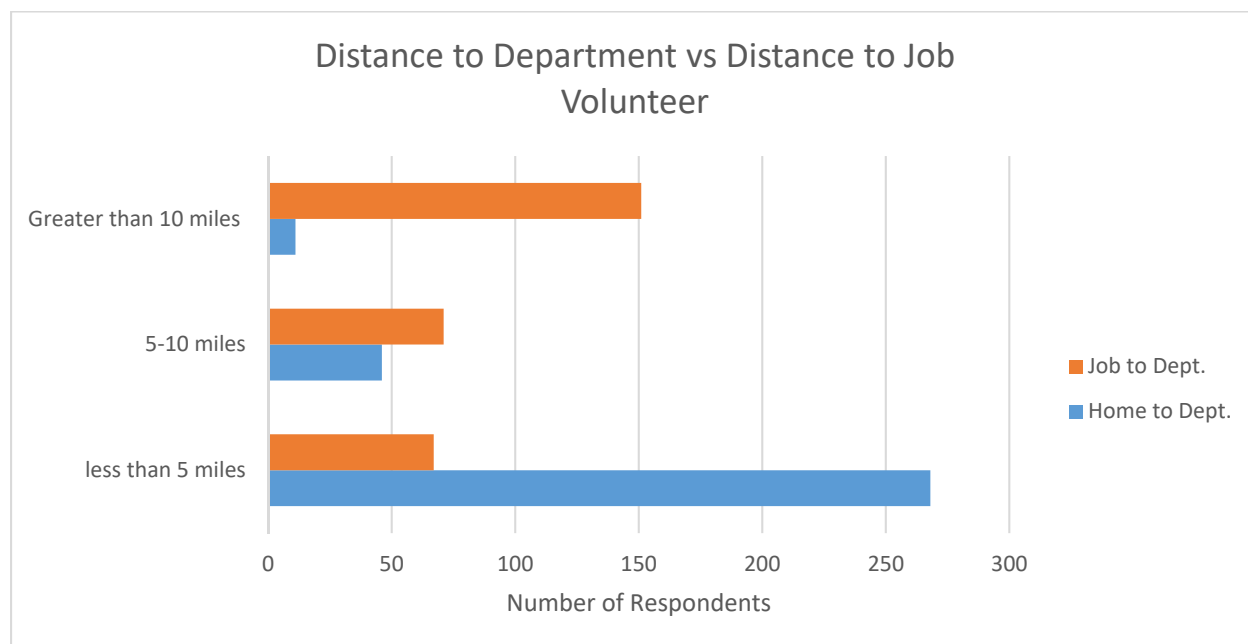


Figure 4: Distance to Department vs. Distance to Job - Volunteer

Question 11 asked how the respondent first learned of the opportunity to become a firefighter. The summary of responses for this question is shown in Figure 5. For the group identified as volunteers, 170 respondents indicated that they learned of the opportunity through a family or friend. Seventy-one responded that they learned via word of mouth and 50 indicated they learned from a firefighter referral. For the group identified as both, 146 respondents indicated that they learned of the opportunity through a family or friend. Fifty-five responded that they learned via word of mouth and 36 indicated they learned from a firefighter referral. Finally, for the group identified as career, 108 respondents indicated that they learned of the opportunity through a family or friend. Sixty-two responded that they learned via word of mouth and 51 indicated they learned from a firefighter referral. These data imply that the most common way members initially learned of becoming a firefighter was through a method that involved personal contact. Family or friend referral was chosen more frequently than all other options combined by all three categories (volunteer, both and career). And word of mouth was second most cited reason given as to how they respondents initially learned of the opportunity.

It is noted that question 11 was a question where respondents could choose more than one answer. Consequently, the total number of responses/choices that are shown does not equal the total number of respondents who answered the question. The summary of the responses given for the 'other' category is provided in the tables in the appendix.

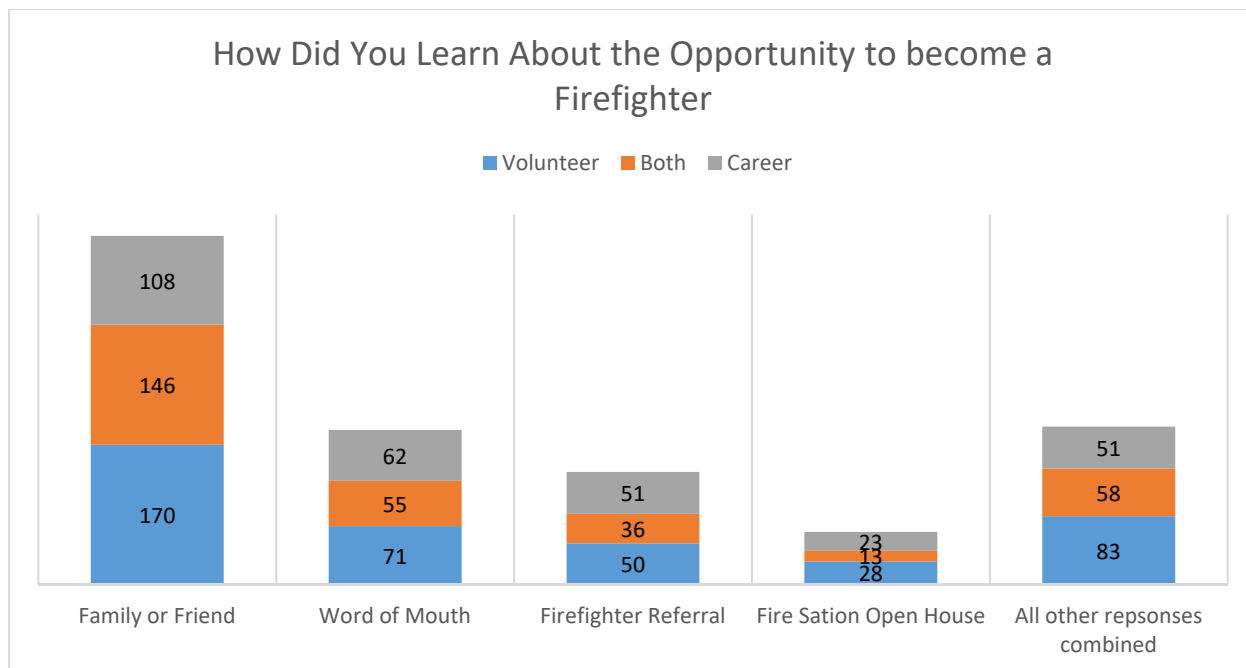


Figure 5: How Did You Learn About the Opportunity to Become a Firefighter

Question 12 asked the respondents to indicate their primary motivation for initially becoming a firefighter. In all three categories (volunteer, both and career), the most commonly chosen answer was service to my community (Figures 6, 7 & 8). Respondents also could choose 'other' and provide a reason. Several responses in the 'other' category included answers such as: desire to help people, to help my fellow man, neighbors helping neighbor, always wanted to help people, etc. Since answers such as these were chosen as 'other' they were not included in the count of service to my community, but there is certainly similar sentiment between these responses and service to my community.

There were additional comments in the 'other' category that indicated respondents have difficulty trying to narrow down the reason to just one as the question required. In these instances, respondents chose 'other', then listed multiple reasons why they joined in the explanation for their choice of other. The answers of this type often included service to the community plus additional reasons. There were a few respondents that mentioned they were motivated by the potential for excitement. One respondent indicated they joined after having been assigned to do community service to the department after having gotten in trouble at school.

The respondents who indicated they were volunteers overwhelmingly chose service to their community as the primary motivation for joining (Figure 6). There were 295 responses to the question and 147 respondents (50%) indicated service to their community was their primary reason. The next most frequently cited response was family connection. Forty respondents (14%) chose family connection as their primary motivation for joining.

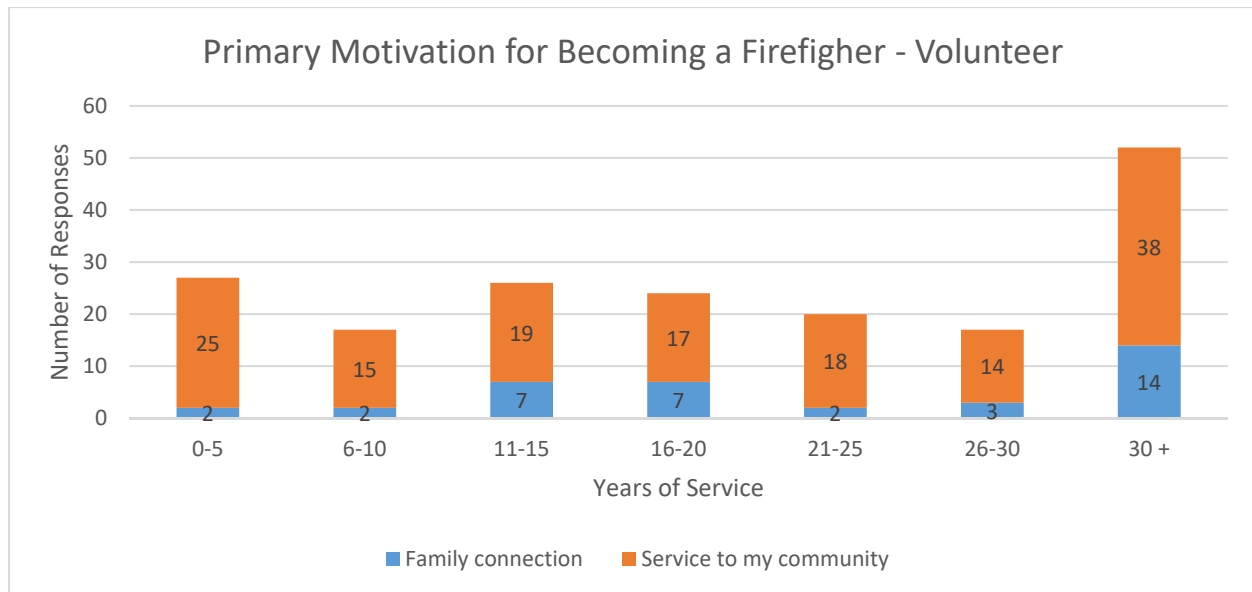


Figure 6: Primary Motivation for Becoming a Firefighter – Volunteer

The 209 responses from the group categorized as both were similar to responses given by volunteers. However, there was one noticeable difference. Service to the community, just as for the volunteers, was the primary reason cited as to why they had joined and family connection was the second most frequent reason cited. However, service to the community was a lower percentage based on the total number from this category answering this question. Fifty-three respondents (25%) indicated serving their community was the primary reason compared to 50% of the volunteers. Family connection was cited by 38 respondents (18%) as the primary reason they had joined, and this was 4% higher than the group categorized as volunteers.

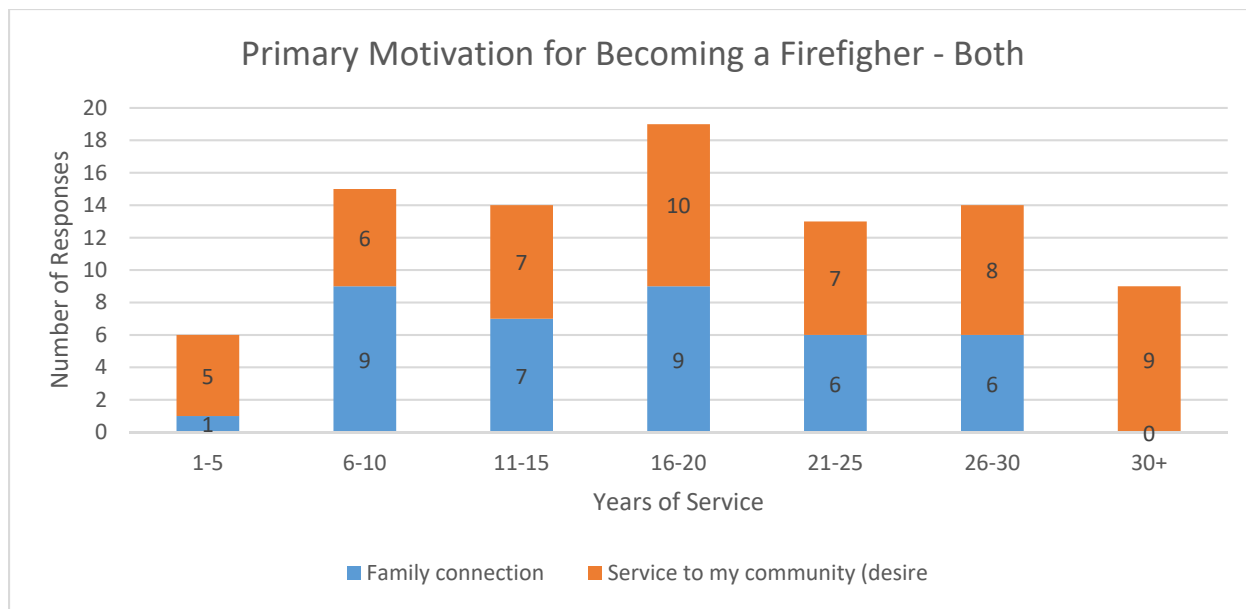


Figure 7: Primary Motivation for Becoming a Firefighter – Both

In the group identifying as career there were a total of 201 responses and 34 of respondents left the question blank. Forty-five (22%) of the respondents answered that service to their community was the primary reason for joining the fire department. Thirty-eight respondents (19%) chose family connection as their primary motivation for initially joining a fire department.

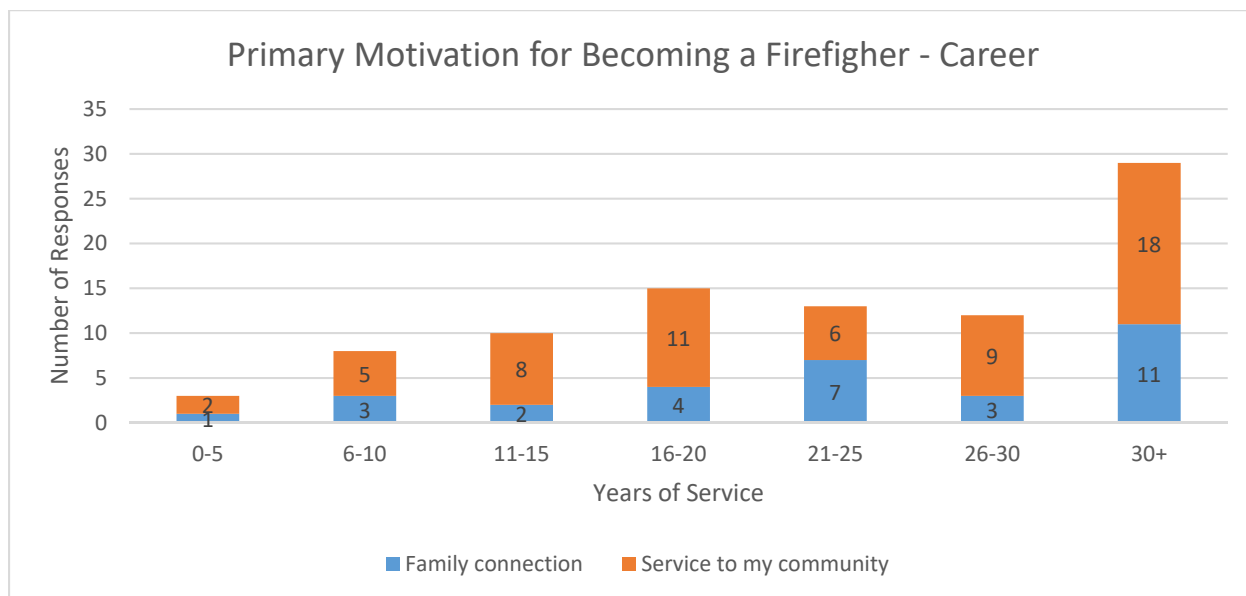


Figure 8: Primary Motivation for Becoming a Firefighter – Career

Question 14 asked which way(s) do you believe is the most effective for recruitment? Respondents were allowed to select all that applied. All three groups (volunteer, both and career) selected "Fire

Station/Open House” as the most effective method for recruiting firefighters. This is noteworthy because in question 11 when the respondents were asked how they initially learned about joining their departments response numbers fire station/open house were much lower. This discrepancy is noted in Figure 9. However, all of the most frequently selected methods were options that again involved some form of personal contact. Firefighter referral, word of mouth, and being asked by a firefighter were the most cited answers.

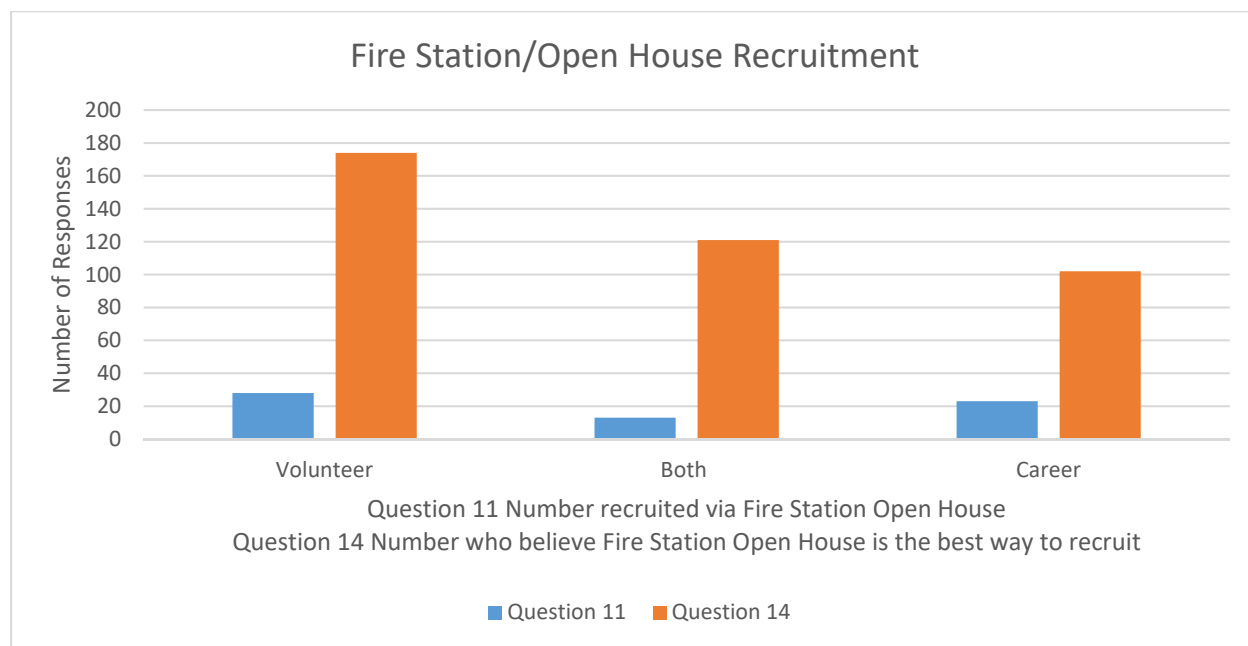


Figure 9: Fire Station/Open House Recruitment

Question 18 asked the respondents to indicate their primary motivation for continuing as a firefighter. Respondents from all three categories agreed that service to their community was the primary reason. This trend was noted regardless of looking at the responses separated by either be age or years of service. The group categorized as volunteers responded that service to my community was their primary motivation for staying in the fire service 156 times (56%). Eighty-three responses (41%) by the group categorized as both selected service to my community as the primary motivations for staying in the fire service. The career category respondents indicated 71 out of 196 times of 37% that service to their community was their primary motivation for staying in the fire service.

The secondary reason for continuing with the fire service was primarily personal fulfillment across all the categories of respondents. The only exceptions to personal fulfillment being the secondary reason was in the category that identified as both and only the respondents who had 6-10 years or 11-15 years of experience. Respondents in those two particular groups chose career experience or future potential employment opportunities as their secondary reason.

Question 19 asked “which retention methods does your department use”. Respondents could select all the answers that applied. For the group categorized as volunteers, the top method was

awards/recognition followed by annual banquet and training. Figure 10 presents a graphical representation of the responses for question 19.

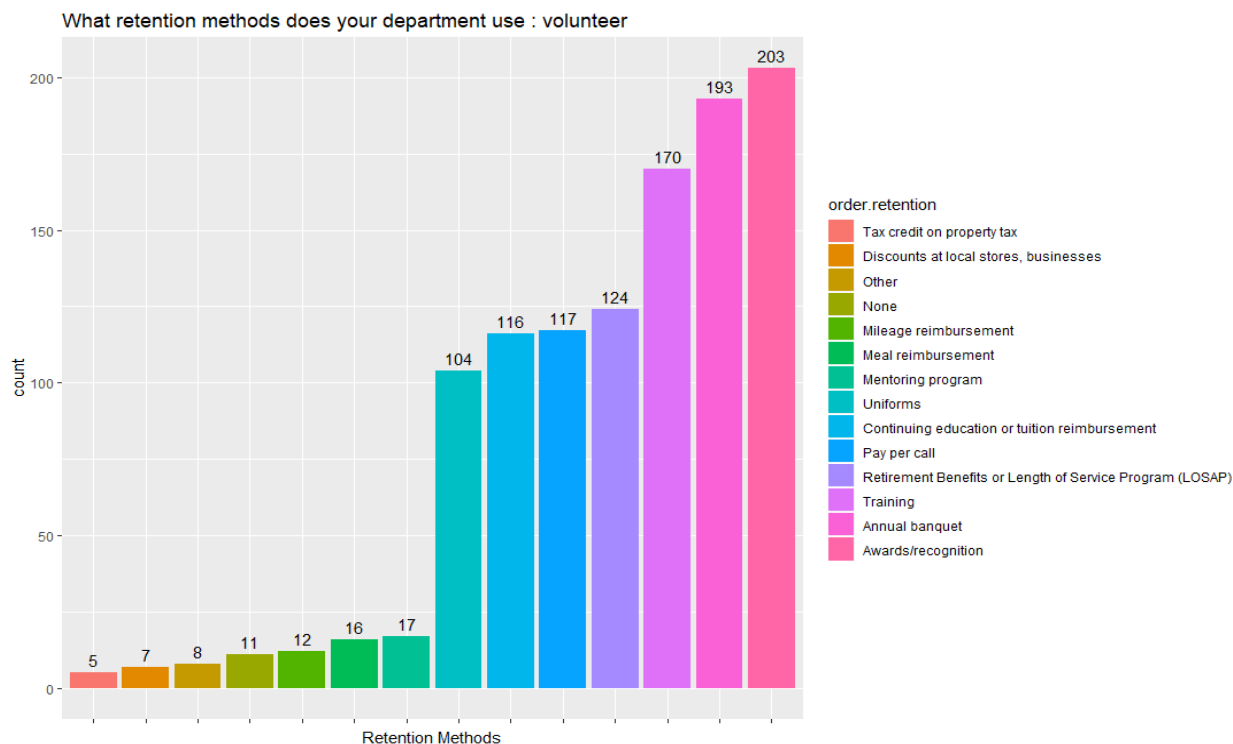


Figure 10: What Retention Methods Does Your Department Use – Volunteer

For the group categorized as both, the responses were very similar to those of the volunteers with annual banquet, training and awards comprising the top three choices. However, the most frequently given responses did not follow the same order as those given by the volunteer group. Additionally, pay per call was the fourth most selected answer. See Figure 11.

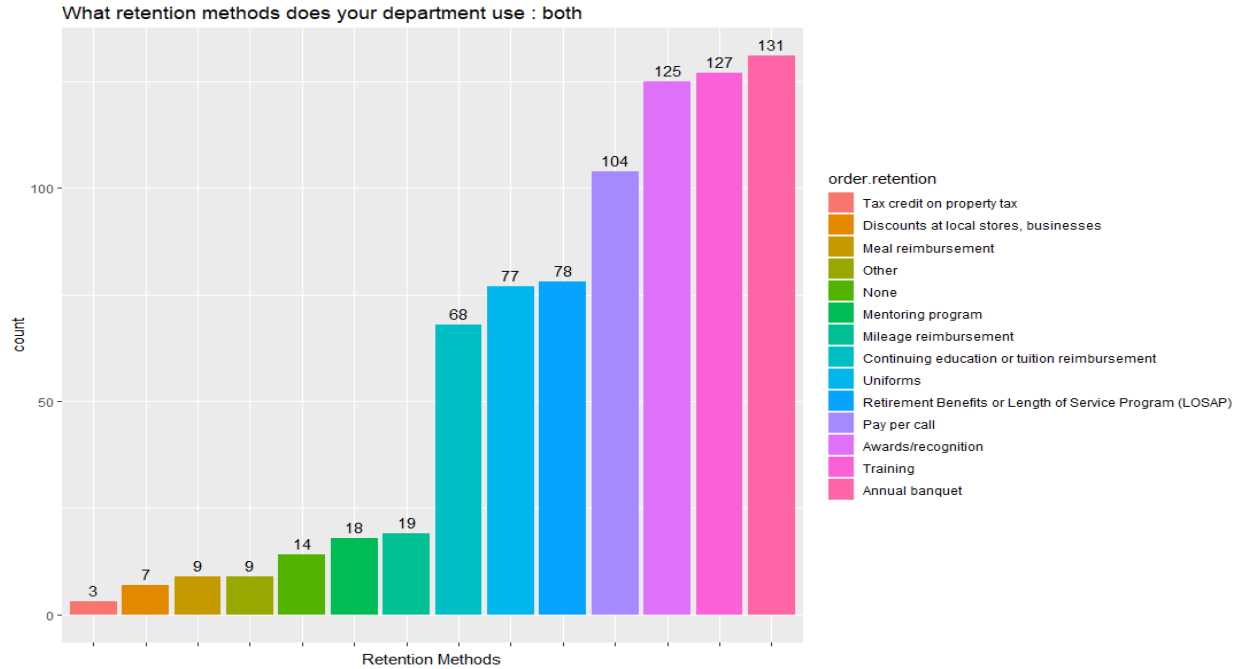


Figure 11: What Retention Methods Does Your Department Use – Both

The responses from the career group for question 19 were more closely grouped together across all the possible answer choices. The top three answers in order were retirement benefits/pension, training and continuing education. Awards and recognition was the fourth most selected response. Figure 12 shows the responses graphically for the career category for question 19.

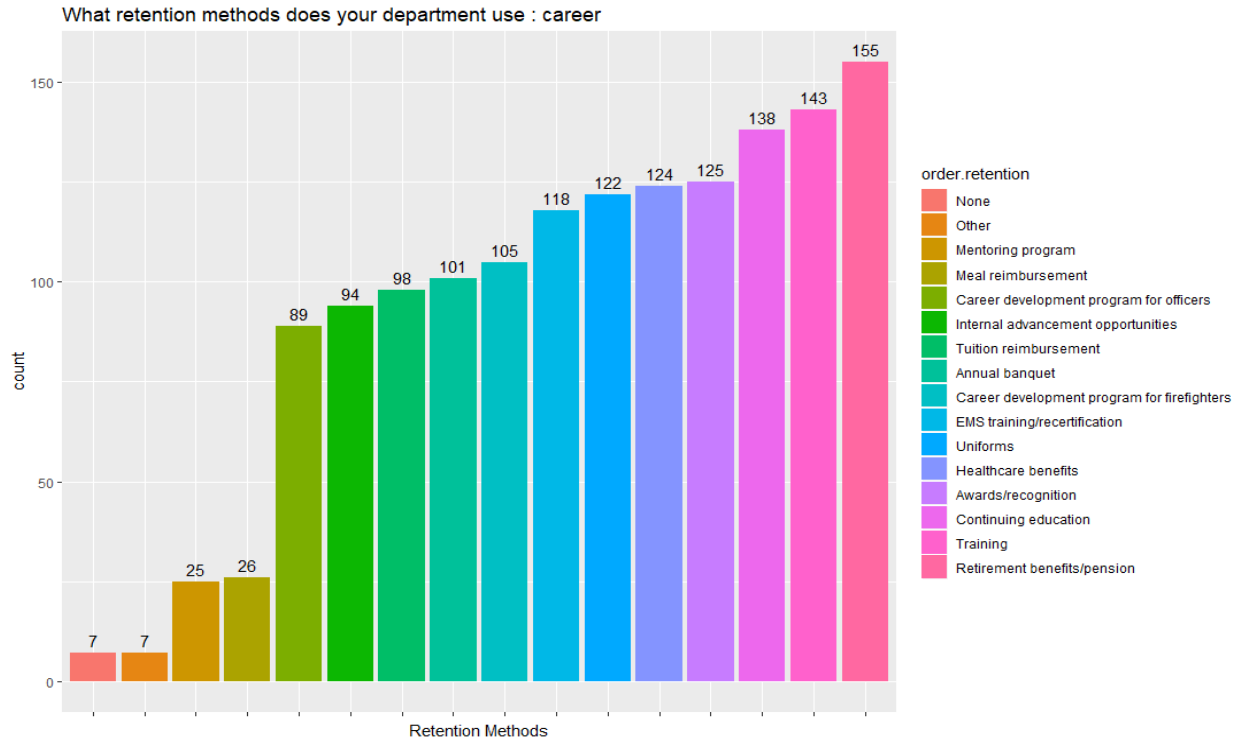


Figure 12: What Retention Methods Does Your Department Use – Career

Question 22 asked the participants if their department conducted exit interviews when someone left the department. There were 283 responses and 199 blanks in the group categorized as volunteer. Fifty-four respondents indicated their department conducted an exit interview, 64 did not know if their department did and 165 indicated their department did not conduct exit interviews. The group categorized as both responded similarly to the volunteers with 139 of the 203 of respondents indicating that their department did not conduct exit interviews, 44 respondents indicated that their department did conduct exit interview and 20 indicated they did not know. The career category had 104 of 193 respondents indicate that their departments did conduct exit interviews, 66 of the career respondents indicated their department did not and 23 did not know. The higher responses rates for “yes” in the career group is not surprising as most departures from a career department would likely involve human resources, and an exit interview is commonly accepted practice.

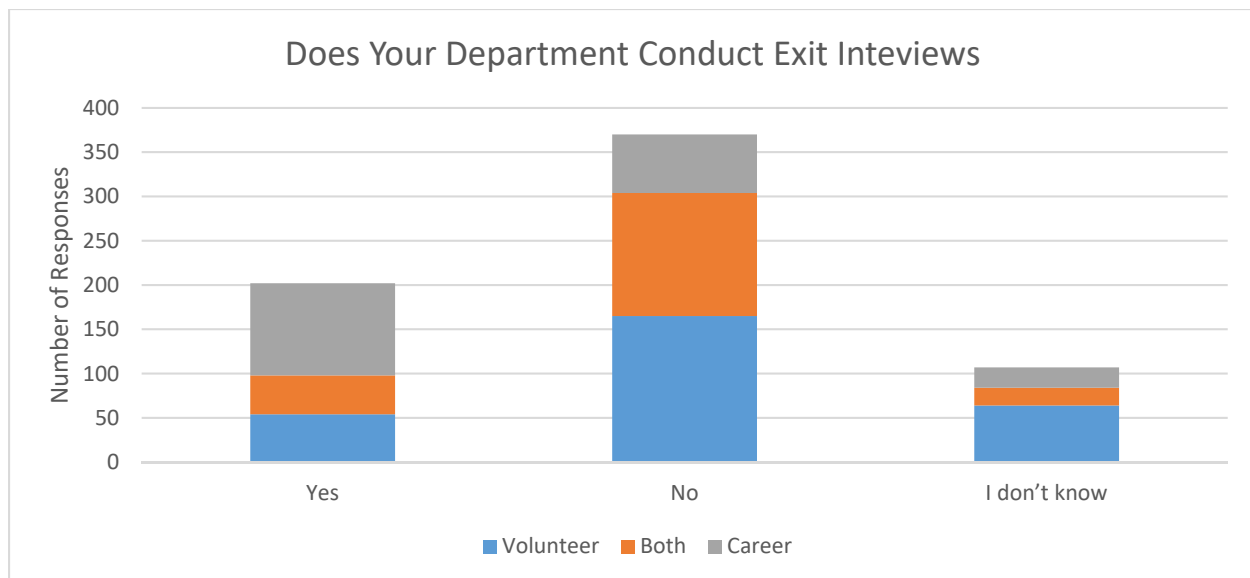


Figure 13: Does Your Department Conduct Exit Interviews - All

The survey participants were asked in question 23, what areas does your department excel in. Respondents were presented a list of choices and could select all that they felt applied to their department. Leadership and financial management ranked at the top for both volunteer and both. Leadership and financial management ranked second and third respectively behind public relations/reputation management for career. All three categories of respondents indicated that recruitment, retention and succession planning were not areas in which their departments excelled. Out of a total of 631 responses, recruitment was chosen as an area in which their department excelled only 64 times (10%). Retention was also chosen also 64 times (10%) out of the 631 responses.

Question 24, as mentioned previously in the response rates section, asked respondents if they believed there were negative leadership issues in their department. For the category of volunteers, 139 (54%) of the 259 who responded indicated yes, while 120 (46%) indicated no. For the respondents categorized as both, 79 (41%) of the 193 responses said no, and 114 (59%) indicated that yes, there were leadership issues. In the career category, 179 respondents answered the question with 121 (68%) responding yes and 58 (32%) responding no.

It was noted in the category of career, that the more years a respondent had in service, the more likely they were to respond with a “yes” to this question. See Figure 14. This particular response pattern was only noted in the career group. A possible reason for this is that the number of respondents for this particular age group is larger than the other categories. When the number of respondents for the career group is plotted on a graph showing the distribution of respondents from the career group based on years of service, the trend line is similar.

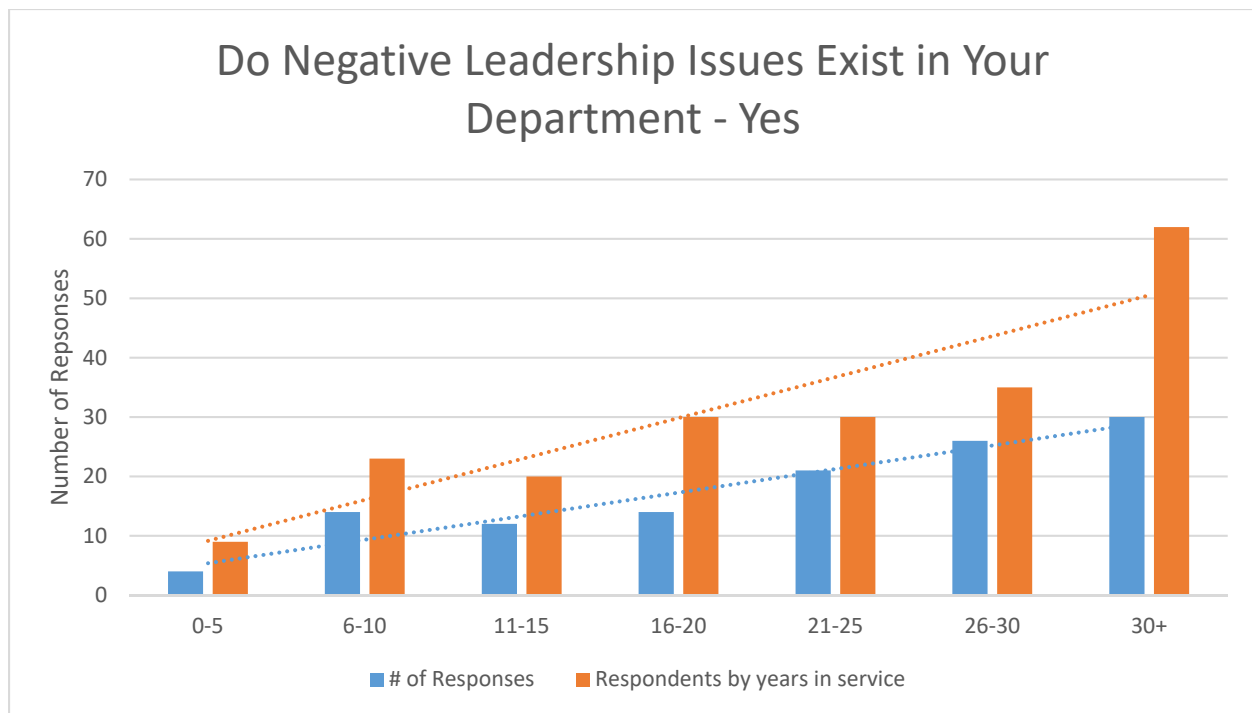


Figure 14: Do Negative Leadership Issues Exist Your Department. - Career

Question 25 asked the survey respondents at what level leadership issues existed (if they did) within their department. The responses from all three categories indicate there are problems at all levels within the department. See Figure 15.

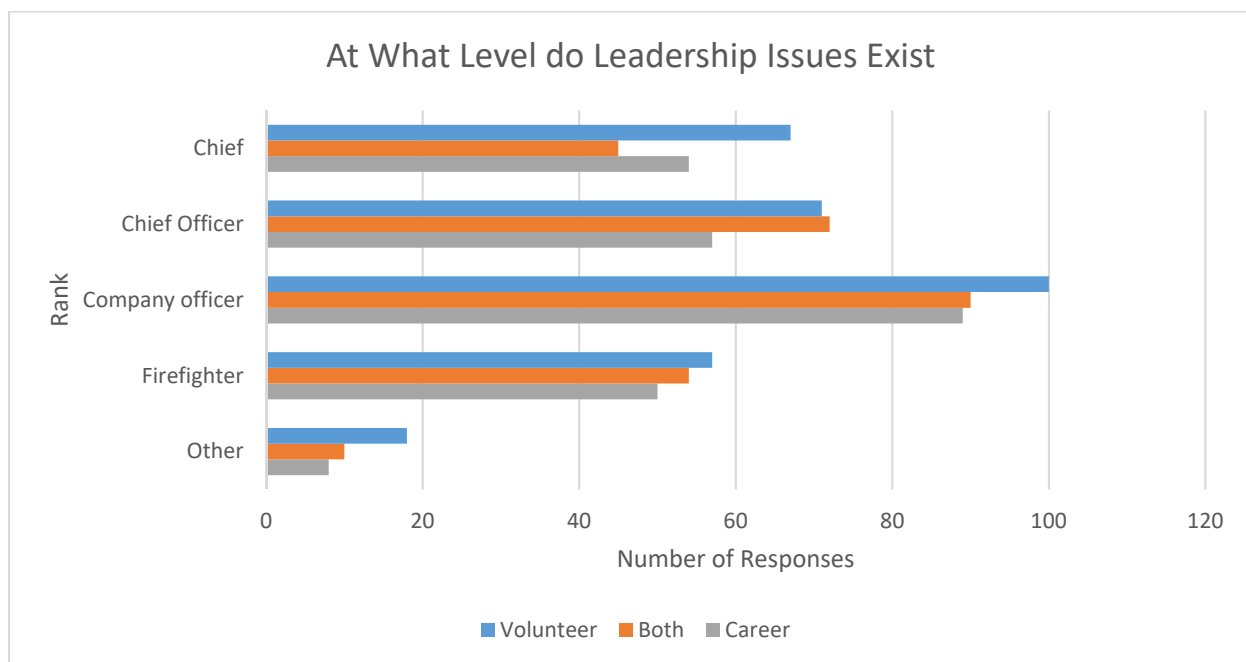


Figure 15: At What Level Do Negative Leadership Issues Exist Your Department.

Question 26 asked the participants to identify the areas of their department that needed improvements. The respondents could choose all that applied. The top five responses for all three groups were the same but were prioritized differently. Figure 16 shows that respondents chose communication, motivating personnel, recruitment, retention and leadership as areas in which their departments needed to improve. Communication, motivating personnel, recruitment and retention changed in priority ranking based on the respondent groups but leadership was the fifth most selected response in all three respondent groups. For the volunteer respondents, communication was the area most frequently selected as needing improvement, followed by motivating personnel, then recruitment and finally retention made up the top four. The respondents from the category of both ranked the areas for improvement as recruitment, motivating personnel, retention then communication. The career category selected communication, motivating personnel, recruitment and then retention as their top four areas.

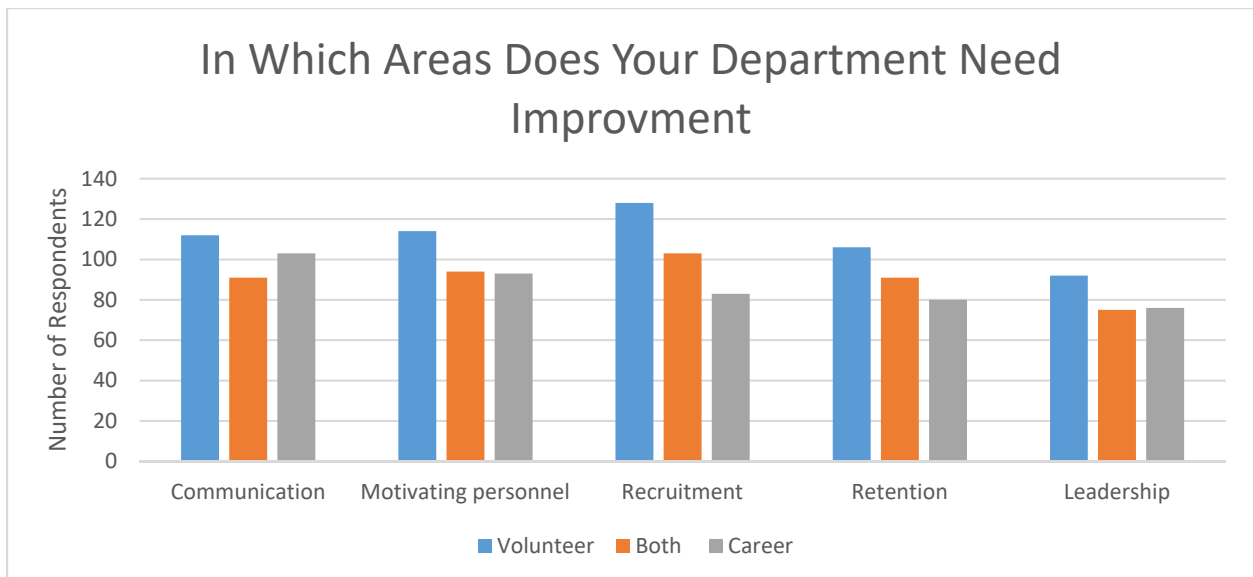


Figure 16: In Which Areas Does Your Department Need Improvement.

Statistical Analysis

This survey had 885 respondents and those respondents are broken down into three separate groups, volunteers, both and career. When the response numbers are further divided into smaller groups (e.g. years of service, ages, etc) the reduction in numbers results in a loss of some statistical power. When it made sense, the responses were recombined. For example, in the questions that asked about recruitment methods, responses were recombined into categories. Responses of Instagram, Facebook, twitter, TV, and similar responses were combined into a category called emedia. Responses such as friend referral, family member, open house, community event or similar were placed in a group called personal connection.

In addition to the descriptive statistics, multiple statistical analyses were conducted with the data. One such statistical test used by the analysts was Chi-square to test the independence of two variables. For example, the analyst's wanted to see if there was a relationship (or lack of one) with using Facebook to recruit firefighters when the respondents were categorized by years in service. The null hypothesis is that the categorized years in service is independent of using Facebook to recruit firefighters, which means these two variables have nothing to do with each other.

The alternative hypothesis is that categorized years in service is NOT independent of using Facebook to recruit firefighters, which means using Facebook to recruit firefighters can give us information about the categorized years in service. If the P-value is less than 0.05, then we reject null hypothesis. This means we accept the alternative hypothesis, which is we accept that using Facebook to recruit firefighters can give us information about the categorized years in service. If P-value is larger than 0.05, then we accept the null hypothesis, which means using Facebook to recruit firefighters can tell us nothing about the categorized years in service. The Chi-square analysis was conducted across multiple questions looking for relationships between factors such as years in service or ages of respondents and variables such as how the respondent was initially recruited. The intent was to determine if there was significance in any of the responses as it related to years of service or ages of the respondents and thus establish a relationship between the variables. The Chi-square analysis failed to show any significant relationships with meaningful results between any of the responses across the entirety of survey.

In addition to the above mentioned statistical analysis, the analysts conducted a Relative Importance Analysis(RIA). RIA is a technique to calculate the relative importance of predictors (independent variables) when independent variables are correlated to each other. Relative Importance Analysis creates a set of new independent variables that are the maximally related to the original independent variables but are uncorrelated to each other. Because these new transformed independent variables are uncorrelated to each other, the dependent variable can be regressed onto this new set of independent variables producing a series of standardized regression coefficients. This analysis was conducted for several questions while using years in service and age as variables.

(Q11/38) When respondents who identified as volunteers were asked about initial enlistment in a fire department those with more years in service displayed a positive relationship with fundraising and word of mouth, while fewer years in service was related to Facebook. This finding has no relationship with age but specifically deals with years in service. Those with fewer years in service indicated Facebook was more important than either fundraising events or word of mouth. However, when analyzed by age of respondent, those who were younger indicated Facebook was important but those who were older indicated word of mouth was more important. The Relative Importance Analysis shows a negative

relationship with Facebook and a positive relationship with word of mouth. This means the younger a person is the more important Facebook was to them whereas as the older a respondent was the more important word of mouth was to them. There is no correlation between age and years of service. That is to say that someone doesn't have to be young to have a few years of service. Someone could be retirement age and joined recently or conversely someone could have joined as a junior member and have six or more years of service and still fall into the young age categories.

The complete data for the Relative Importance Analyses can found in the Appendix.

Q12/39 asked what was your primary motivation for initially becoming a firefighter. When the group identified as volunteers was analyzed by years in service, family connection proved to be nearly two times as important as service to my community. However, when analyzed by age, service to my community was nearly five times greater in importance than all other answers. Both age and years of service indicated positive relationships meaning as both years in service and age increased, the relationship became stronger for those particular answers.

For the respondents who identified as career when analyzed by years in service indicated that friendship was the most important. This relationship was positive, which means the relationship to this answer grows stronger as years in service increase. When the same group was analyzed by age, respondents chose incentive and financial reasons as most important. This relationship was positive also. Recruitment efforts was the second most important reason and the relationship was negative meaning the younger the person was the less important that particular answer was to them.

Q16/41 asked the respondents to identify what they believed to be the most effective ways to recruit firefighters. The volunteers when analyzed by years of service, indicated that being asked by a firefighter was the most important, followed closely by a website/email. Recruitment night and Twitter were also important but showed a negative relationship with years in service. When the same group was analyzed by age, recruitment night was the most important by approximately two times, and this relationship also presented a negative relationship.

When data from respondents who identified as career were analyzed, a school visit was nearly two times as important as any other method. Based on years in service the relationship was negative. Similarly, when this group was analyzed by age, school visit was again the most important. School visit was three times more important versus the other answers and again the relationship is negative.

Q17/42 asked of the ways you indicated above, which do you believe is the one MOST effective for recruitment? The volunteers, when analyzed by years of service, echoed once again that being asked by a firefighter was the most important followed closely by firefighter referral. When analyzed by age, website/email was ranked as most important.

The respondents identified as career, when analyzed by years in service, indicated word of mouth was most important, but there was no relationship, positive or negative. Second most important was Facebook with a negative relationship. When analyzed by age, word of mouth was most important by nearly three times with no relationship apparent.

Question 17/42 was one of the few questions where the category of respondents labeled as both had a response that showed a relationship. Facebook was chosen as twice as important as word of mouth in the analysis by years of service. The relationship was negative with Facebook, while word of mouth displayed no relationship. When analyzed by age, Facebook again was nearly two times as important as word of mouth with Facebook showing a negative relationship and word of mouth having no relationship.

Q18/43 asked what is your PRIMARY motivation to continue as a firefighter? The volunteer group when analyzed by years of service, chose career experience three times more often than any other answer. There was a negative relationship with years in service. When the data were reviewed by age, career experience again was the most important answer and again exhibited a negative relationship. This means that career experience is most important to those with fewer years of service and those who are younger.

The respondents identified as career, when analyzed by years in service and age, indicated administrative duties as the most important answer. These were positive relationships, which indicates as one achieves more years in service or advances in age, administrative duties become more important.

Q25/50 asked at what level do negative leadership issues exist? Both the volunteer and career groups indicated that leadership issues resided with either the chief or chief officers. There was no relationship between these responses and age or years of service.

Recommendations

The survey as given presented some challenges for data analysis. The foremost of these challenges were the questions which were open ended or when respondents could respond with “other”. In some questions, the response of “other” was the dominant answer statistically, yet the responses were very varied and did not often lend themselves to categorization. As such, there was a loss of statistical power for those questions. In the future, if the result is to establish significance of an answer or even a possible relationship, it would be best to identify the categories and limit responses to those categories.

Additionally, providing three categories (volunteer, career and both) for respondents also lessened the statistical power in some instances. Future surveys may want to adhere to only two categories, volunteer or career, and force the respondent to choose the group that fits them best.

Questions such as number 11 were also difficult, in that many of the answers could have been overlapping. Moreover, since the respondents could choose all that applied, the ability to establish significance was taken away. Several of the answers were not mutually exclusive. For example: word of mouth, family or friend, firefighter referral or open house/recruiting event are all types of personal contact. Many respondents picked multiple similar answers. Did the respondent choose both firefighter referrals and recruiting event because a firefighter asked them at a recruiting event? Or was the family or friend also a firefighter referral? With answers that are not mutually exclusive, there is no way to narrow the results into truly useable data. The question may have been more meaningful if answer choices were grouped into a smaller number of categories.

Question 21 asked why respondents believed firefighters left. The answers provided are only someone’s suppositions as to why another left. The circumstances surrounding a member’s departure from a volunteer department can be varied and if an exit interview is not conducted, the true reason may not be known. The avenue for these departures can range from a formal resignation letter from the departing member to a member just disappearing and the department having no indication of why they left. Moreover, in this disappearance scenario the department is often faced with a loss of equipment issued to the member that no longer responds. However, when there is an opportunity to conduct an exit interview, it will serve as a valuable data collection tool and could possibly provide information on policies, procedures or circumstances that can be improved to retain other members. Exit interviews are encouraged.

Future surveys may consider additional questions regarding leadership issues and include some specific responses from which to choose from. Having predefined answers could potentially increase the response rate for that question or questions of a similar nature.

The survey did not ask if the years of service was with a member’s current department or combined years with different departments or some combination thereof. Without information such as this, it is not possible to tell whether departments have an established longevity with their members or if the 30+ years of service is due to other factors. There are several scenarios which could contribute to 30+ years, including the aforementioned longevity with the specific department or other circumstances such as current respondents indicating they are now volunteers after retiring from a career department.

It is apparent from the survey that both personal contact and usage of what we can call emedia are important to recruiting. Personal contact was prevalent across all categories: volunteer, career and both. Additionally, personal contact was important to all groups even when looked at by age and years of service. Emedia such as Facebook, Twitter, websites and the often mentioned Instagram in the “other” categories was especially important for new members and for those who were of a young age. Facebook was important for the older group as well. This observation reflects the trend of older people using Facebook more while younger people are using Twitter and Instagram more.

North Carolina is uniquely positioned with approximately 100 high school fire/public safety academies. These high school programs were mentioned in the questions that pertained to recruitment in the “other” responses. Taking advantage of these academies by using both personal contact and emedia with this large potential pool could be exceedingly fruitful for recruitment efforts.

While this survey may not have provided all the answers that were sought in regard to recruitment and retention for the North Carolina fire service, it does provide some valuable insight. Identifying what methods of recruitment are most effective, what motivates one to join and what motivates a member to remain active are certainly important first steps in developing a comprehensive recruitment and retention plan. This survey lays a foundation from which other similar or even more targeted surveys can be developed. Moreover, the data already gathered can be utilized immediately to begin new recruitment efforts.

On behalf of Trisha, Xingnan, myself and the University of North Carolina at Charlotte, thank you for allowing us to be a part of this project.

Appendix

Response Rate by Volunteer

Question	Volunteer 402			
	Responses	Blanks	Non-Response Rates	Response Rates
What town (or independent city) is your VOLUNTEER department located in?	347	55	14%	86%
What is your primary RESIDENCE zip code?	325	77	19%	81%
What is the approximate distance of your department from your home?	325	77	19%	81%
What is the approximate distance of your department from your primary job?	289	113	28%	72%
Please choose what category BEST DESCRIBES your primary occupation. Choose ONLY ONE of the options below.	325	77	19%	81%
What is your current rank?	325	77	19%	81%
How many years have you been in the fire service? (If you serve as career and volunteer, please enter total number of years.)	325	77	19%	81%
What is your current age?	325	77	19%	81%
Thinking back to when you first enlisted as a firefighter, how did you learn about opportunities to become a firefighter? Select all that apply.	295	107	27%	73%
What was your PRIMARY motivation for INITIALLY becoming a firefighter? Select only ONE choice.	295	107	27%	73%
How many months did it take you to become a member after submitting your initial application?	292	110	27%	73%
How many months did it take you to become an IDLH firefighter after being accepted as a member?	273	129	32%	68%
What minimum training and/or certifications does your department require for you to be considered a firefighter? Check all that apply.	294	108	27%	73%
What do you believe are the most effective ways to recruit firefighters? Select all that apply.	294	108	27%	73%
Of the ways you indicated above, which do you believe is the one MOST effective for recruitment? Select only one answer.	295	107	27%	73%
What is your PRIMARY motivation to continue as a firefighter?	283	119	30%	70%

Which retention methods does your department use? Select all that apply.	282	120	30%	70%
Based on your personal experience and beliefs, please rate the effectiveness of the retention methods below (even if your department doesn't have all of them).	283	119	30%	70%
Think about the firefighters you know who have left the fire service. Why do you believe they left? Select the top three (3) reasons.	282	120	30%	70%
Does your department conduct exit interviews when someone leaves the department?	283	119	30%	70%
In which areas does your department excel? Select all that apply.	258	144	36%	64%
Do you feel that there are negative leadership issues in your department?	259	143	36%	64%
At what level do negative leadership issues exist? Select all that apply.	163	239	59%	41%
In which areas does your department need improvement? Select all that apply.	257	145	36%	64%
Of your answers above, which area is the MOST in need of improvement? Select only one answer.	259	143	36%	64%
In what areas would you like to see more training? Select all that apply.	258	144	36%	64%
What type of training method/format do you prefer? Select all that apply.	258	144	36%	64%
Generally, when is the best time for you to attend classroom/live instructor-led training? Select only one answer.	259	143	36%	64%

Response Rate by both

Question	Both 249			
	Responses	Blanks	Non-Response Rates	Response Rates
What town (or independent city) is your VOLUNTEER department located in?	232	18	7%	93%
What is your primary RESIDENCE zip code?	218	32	13%	87%
What is the approximate distance of your department from your home?	218	32	13%	87%
What is the approximate distance of your department from your primary job?	206	44	18%	82%
Please choose what category BEST DESCRIBES your primary occupation. Choose ONLY ONE of the options below.	218	32	13%	87%
What is your current rank?	218	32	13%	87%
How many years have you been in the fire service? (If you serve as career and volunteer, please enter total number of years.)	218	32	13%	87%
What is your current age?	218	32	13%	87%
Thinking back to when you first enlisted as a firefighter, how did you learn about opportunities to become a firefighter? Select all that apply.	209	41	16%	84%
What was your PRIMARY motivation for INITIALLY becoming a firefighter? Select only ONE choice.	209	41	16%	84%
How many months did it take you to become a member after submitting your initial application?	206	44	18%	82%
How many months did it take you to become an IDLH firefighter after being accepted as a member?	204	46	18%	82%
What minimum training and/or certifications does your department require for you to be considered a firefighter? Check all that apply.	209	41	16%	84%
What do you believe are the most effective ways to recruit firefighters? Select all that apply.	209	41	16%	84%
Of the ways you indicated above, which do you believe is the one MOST effective for recruitment? Select only one answer.	209	41	16%	84%
What is your PRIMARY motivation to continue as a firefighter?	203	47	19%	81%
Which retention methods does your department use? Select all that apply.	203	47	19%	81%

Based on your personal experience and beliefs, please rate the effectiveness of the retention methods below (even if your department doesn't have all of them).	203	47	19%	81%
Think about the firefighters you know who have left the fire service. Why do you believe they left? Select the top three (3) reasons.	203	47	19%	81%
Does your department conduct exit interviews when someone leaves the department?	203	47	19%	81%
In which areas does your department excel? Select all that apply.	193	57	23%	77%
Do you feel that there are negative leadership issues in your department?	193	57	23%	77%
At what level do negative leadership issues exist? Select all that apply.	132	118	47%	53%
In which areas does your department need improvement? Select all that apply.	193	57	23%	77%
Of your answers above, which area is the MOST in need of improvement? Select only one answer.	193	57	23%	77%
In what areas would you like to see more training? Select all that apply.	193	57	23%	77%
What type of training method/format do you prefer? Select all that apply.	193	57	23%	77%
Generally when is the best time for you to attend classroom/live instructor-led training? Select only one answer.	193	57	23%	77%

Response Rate by Career

Question Topic	Career 234			
	Responses	Blanks	Non-Response Rates	Response Rates
What town (or independent city) is your VOLUNTEER department located in?	201	34	14%	86%
What is your primary RESIDENCE zip code?	210	25	11%	89%
What is the approximate distance of your department from your home?	210	25	11%	89%
What is the approximate distance of your department from your primary job?	0	235	100%	0%
Please choose what category BEST DESCRIBES your primary occupation. Choose ONLY ONE of the options below.	0	235	100%	0%
What is your current rank?	210	25	11%	89%
How many years have you been in the fire service? (If you serve as career and volunteer, please enter total number of years.)	210	25	11%	89%
What is your current age?	210	25	11%	89%
Thinking back to when you first enlisted as a firefighter, how did you learn about opportunities to become a firefighter? Select all that apply.	202	33	14%	86%
What was your PRIMARY motivation for INITIALLY becoming a firefighter? Select only ONE choice.	201	34	14%	86%
How many months did it take you to become a member after submitting your initial application?	0	235	100%	0%
How many months did it take you to become an IDLH firefighter after being accepted as a member?	0	235	100%	0%
What minimum training and/or certifications does your department require for you to be considered a firefighter? Check all that apply.	201	34	14%	86%
What do you believe are the most effective ways to recruit firefighters? Select all that apply.	202	33	14%	86%
Of the ways you indicated above, which do you believe is the one MOST effective for recruitment? Select only one answer.	201	34	14%	86%
What is your PRIMARY motivation to continue as a firefighter?	193	42	18%	82%
Which retention methods does your department use? Select all that apply.	194	41	17%	83%
Based on your personal experience and beliefs, please rate the effectiveness of the retention methods below (even if your department doesn't have all of them).	193	42	18%	82%

Think about the firefighters you know who have left the fire service. Why do you believe they left? Select the top three (3) reasons.	194	41	17%	83%
Does your department conduct exit interviews when someone leaves the department?	193	42	18%	82%
In which areas does your department excel? Select all that apply.	180	55	23%	77%
Do you feel that there are negative leadership issues in your department?	179	56	24%	76%
At what level do negative leadership issues exist? Select all that apply.	137	98	42%	58%
In which areas does your department need improvement? Select all that apply.	180	55	23%	77%
Of your answers above, which area is the MOST in need of improvement? Select only one answer.	179	56	24%	76%
In what areas would you like to see more training? Select all that apply.	180	55	23%	77%
What type of training method/format do you prefer? Select all that apply.	180	55	23%	77%
Generally when is the best time for you to attend classroom/live instructor-led training? Select only one answer.	179	56	24%	76%

Summary of Responses – Other

Q11 Thinking back to when you first enlisted as a firefighter, how did you learn about opportunities to become a firefighter? Select all that apply.

Volunteer	Both	Career
VFD bar-b-q to raise money	Wanted to be a fireman, went to the local volly and applied	Just stopped by to see what it was all about.
New to area from Alaska just walked in the station and signed up	Lived across the road	Family in FD
The department is my neighbor	Been around fire service whole life.	Employment Security Commission and subscribed to newsletter with firefighter openings listed
Just wanted to	Walk in	Wanted to be a firefighter growing up. Applied for job when turned 21 years of age
Just wanted to give back to the community	11/1/2009	I drove up on a bad accident. The volunteer department arrived while I was with patients. I liked helping others and decided to join. The newspaper check is for how I found out about being a career firefighter.
I was looking to give back to the community after hurricane Irene.	Junior FF program	Always wanted to be one
My own research	Family Word of mouth	A Coworker suggested I give it a try but I had always wanted to be a fire fighter since I was about 5
My dad had volunteered at same dept. in 1950s-60s	Father and grandfather was in the fire service	Stopped by and ask could I help out
Power plant fire brigade training	Fire Explorer program. Boy Scouts	Explorer program
Friends	Door to Door Recruitment in 1976	church picnic
9-11 Tragedy	Family Word of mouth (nearly 30 years ago...)	Needed a First Aid Class for college class. VFD was offering the class to community. They ask after class if anyone would like to join the department.
My friend and chief		recruitment by current dept member
HANGING AROUND THE STATION WITH MY DAD		I joined the for service after being on a rescue squad that was across from my house
self driven		
Threw towing		
Rented across the street from a rural volunteer station		
Military Experience		
Several neighbors were in the FD		
Call at my home, spoke to the crews, suggested i come by for training one night.		
Fire Explorer / Jr. Firefighter		
Always wanted to be a firefighter, so I talked to a member of the department		
Visiting FH to vote and/or list property taxes		
work for the town		
Father was Deputy Chief		
My family		
chasing fire truck on bike		

Q12 What was your PRIMARY motivation for INITIALLY becoming a firefighter? Select only ONE choice.		
Volunteer	Both	Career
Neighbors helping neighbors	Paying back for having to use the fire department	Seemed like it would be exciting!
Calling	Wanted too since I was little	Just gave it a shot.
To help my fellow man	Helping others	Not sure why, as early as I can remember this career is what I wanted
Desire to help people		Got in trouble at school and needed community service time
Brotherhood		Met fire chief
fulfillment of a dream to be a fire fighter		I went to a training at a volunteer station to satisfy a friend and i fell in love with the fire service
retirement in state and service to community, you wouldn't let me pick more than one		Needed a career change to something I enjoyed and was different everyday
Search and Rescue		
excitement		
Always wanted to help people		
Safety education and fire prevention		
TEST		
Pride		
I love my community		

Q16 What do you believe are the most effective ways to recruit firefighters? Select all that apply.		
Volunteer	Both	Career
All social media too include Instagram is a huge part, not just facebook and Twitter. Coming from a current Army recruiter.	High School firefighter program	Training event in the community - controlled burn, etc.
All avenues available.	JR firefighter program in school	Putting the community you serve first
Offer Firefighter course to high school students as part of high school vocation course.	Local High School Fire Academy	Increase pay!
Stop the ever escalating requirements and get back to basics	There isn't. The person needs to want to be a firefighter. Volunteers for this society is a thing of the past.	Firefighter curriculum in schools
No longer active due to BOD caring more about having new trucks than appreciating their own members. Our departure has lost a good number of people over the past five years and the chief never even picked up the phone to call and even ask why.	Social media	Recruiting people out of high school
All the above	Explorer Programs	ride-alongs
Some type of Payment.	Today's generations are looking for something on return. They want some sort of incentive tax credit or more retirement etc. The true volunteers are becoming limited that's just something that we are going to have to struggle with. People don't volunteer for the urge to help people or for commitments to the community anymore.	Money, pay, incentives
I have run out of ideas.	Our situation is based on our demographics. The majority of our community is older retired so we do not get as many young people in the district showing interest. We are directly between two military bases, that includes air stations with crash fire rescue trained young military men so that is a draw for us as well as our Junior Firefighter program.	Social media
	Raise the pension monthly payment amount and/or amend the law to where one can draw when they reach the twenty year mark.	We need to utilize all methods available to reach a diverse audience.
	All social media avenues. Develop relationships with high school students similar to military recruiting	Jr firefighter program, programs within the schools
	All of these are good but you have a lot of the same....recruitment event and night, word of mouth and being asked	
	Every county needs a high school fire academy to recruit new members.	
	We have always conducted fire prevention in lower grade levels but let them all go after that we have to get back into the schools	

Q17. Of the ways you indicated above, which do you believe is the one MOST effective for recruitment? Select only one answer.		
Volunteer	Both	Career
personal desire and personal contact with the fire department community	High School firefighter program	Being out in the public, staying active.
Offer Firefighter course to high school students as part of high school vocation course.	Both equally	Firefighter curriculum in schools
It is tough to get volunteers anymore	Explorer Program	Broad social media
At this time social media to reach young people	Social media	All social media platforms to reach today's younger workforce.
A combination of Facebook and website	They are all essential - The feedback that I'm receiving from new candidates that they checked out our web-page and were drawn to our VFD because we were an accredited department and therefore consistently maintain a waiting list and now are referring new potential candidates to neighboring departments.	I don't think just one way/method is good enough - a variety of mediums have to be used
		Money, pay, incentives
		Social media

Q18 What is your PRIMARY motivation to continue as a firefighter?		
Volunteer	Both	Career
Calling	I'm a career fireman, I love the job	I enjoy the job and the benefits that come with it, both financial and other
Serving my fellow man	It's just what I know	A career in a field that doesn't relocate outside the US
brotherhood	No new did coming in to relieve you so you push to stay longer.	Primary job.
Quit 2 years ago. Too busy in career	For volunteer service: The 20 year retirement pension. I have other priorities in my life right now so I'm not very active as a volunteer.	Health Insurance
Love my community	Helping others	I enjoy the job
But retired as I no longer wish to involve my time when people aren't appreciated.	There is no one else after my age group.	Filling out my 30 years of service
	Continued service to our community and to move our organization continuously forward through the accreditation continuous improvement program	Keeps my family fed.
		Retirement

Q19 Which retention methods does your department use? Select all that apply.		
Volunteer	Both	Career
Stipends for station on duty time	Paid shifts	Swag - t-shirts, outerwear, hats, blankets, etc
Points system for training hours, calls, points can be used for merchandise	Full time departure offers an incentive program where if volunteers make 20% of the calls for the month and comes to training they get paid \$3 a call for non-certified personnel. \$4 a call for either FF II or EMT, and \$5 a call for fully certified personnel. My volunteer department has no kind of anything offered for retention.	Try to offer a drama free work environment, where people and their contributions are appreciated.
Duty Crew Stipen	Gym Membership	Ensetive pay. \$5.00 a call.
Family Fun Day during the summerGaston Eye Associates (Dr. Foster). Catered meal by Salsareto's (tacos, salad, queso & chips, black beans) and local restaurant (pork bbq, chicken strips, baked beans, banana pudding, tea) and family activities such as a bounce house with slide and pool of water at the bottom, corn hole games, basketball, ice cream vendor making milkshakes and various types of ice cream, kid's activities, and games.	Leather helmet	Not enough incentives like neighboring peers.
Duty Crew	Benefits and longevity	Incentive Program
Supplemental insurance	We have Insurance for all volunteers, and free gym membership through the department for a local gym.	Life Insurance
Calls based on 3.00 per call which does not even cover cost of driving to the station.	Family atmosphere is key.	Salary
	Part-time employment. The only reason I've stayed in the department.	Not much
	Some benefits are in conjunction with the NCSFA or NCDOL.	

Q23. In which areas does your department excel? Select all that apply.		
Volunteer	Both	Career
Ongoing training opportunities.	The CFAI model addresses all of these categories as part of the accreditation process and our department addresses all of them - Retention of Military personnel is an issue due to frequent moves by the department of the army. Our military members average a three (3) year retention.	We are building on many of the items listed. However, I cannot say that we currently excel at any of them.
I just don't know yet!		Operational Competency
annual fund raiser		Training
Sad to say but our department can't qualify on any of these		We are suffering in all these areas

Q26 In which areas does your department need improvement? Select all that apply.		
Volunteer	Both	Career
ALL	Administration	All
Board responsibilities	All departments can improve in all categories	Duty, responsibility and pride
career vs vol. relationships	Funding from Town Government	Health Insurance for families/or partial contribution
Training	Discipline	
Good leadership, how to communicate with others, respect for other opinions, without a know it all attitude.	Department needs more money from county	
All the above	Can always keep improving in everything no matter how good a department is.	
test	Staffing	
Quite honestly we all need help with recruitment and retention		
The county needs to provide more money to departments. Not just county owned fire departments		

Relative Importance Analysis

Q11/38. Thinking back to when you first enlisted as a firefighter, how did you learn about opportunities to become a firefighter? Select all that apply.							
occupation	category	Positive relationship	relative importance value	negative relationship	relative importance value	no relationship	relative importance value
volunteer	years in service	fundraising event	0.1108	Facebook	0.3577		
		word of mouth	0.2037				
	age	word of mouth	0.3074	Facebook	0.2343	family or firefighter referral	0.1299
career	years in service	school visit	0.116				
	age	other	0.1859	web email	0.1638	brochure	0.1111
				fundraising event	0.1535	newspaper	0.1665
both	years in service					EMS referral	0.1317
				Facebook	0.1544	fundraising event	0.1739
	age			firefighter referral	0.2234		
						recruitment night	0.2462
						firefighter referral	0.1767
						fundraising event	0.129

Q12/39. What was your PRIMARY motivation for INITIALLY becoming a firefighter? Select only ONE choice.							
occupation	category	Positive relationship	relative importance value	negative relationship	relative importance value	no relationship	relative importance value
	age	service to my community	0.2785				
		Service to my community	0.5944				
		other	0.1172				
		fire response	0.107				
		personal fulfillment	0.0818				
		family connection	0.068				
career	years in service	friendship	0.456			fire response	0.2
	age					career experience	0.1963
		Incentive/financial	0.3473	recruitment efforts	0.2519	Friendship	0.2081
both	years in service					fire response	0.1132
						Family connection	0.2979
	age					service to my community	0.1827
						adrenaline rush	0.18
						Service to my community	0.4136
						family connection	0.3343

Q16/41. What do you believe are the most effective ways to recruit firefighters? Select all that apply.							
occupation	category	Positive relationship	relative importance value	negative relationship	relative importance value	no relationship	relative importance value
volunteer	years in service	Being asked by a firefighter	0.17395	recruitment night	0.09831	word of mouth	0.1002
		website email	0.12816	twitter	0.0728		
		television	0.061				
	age	Being asked by a firefighter	0.1424	Recruitment night	0.27819		
		word of mouth	0.15795				
career	years in service	web email	0.047				
		Poster	0.14278	school visit	0.2386		
				fund raising event	0.199		
	age	poster	0.08938	School visit	0.29775	radio	0.087
				fundraising event	0.1682		
both	years in service	Brochures	0.1752			Community event	0.2011
						Facebook	0.1509
						being asked by a firefighter	0.11055
	age					Recruitment event	0.26029
						Facebook	0.15797
						community event	0.13266
						brochures	0.1122
						recruitment night	0.10433

Q17/42. Of the ways you indicated above, which do you believe is the one MOST effective for recruitment? Select only one answer							
occupation	category	Positive relationship	relative importance value	negative relationship	relative importance value	no relationship	relative importance value
volunteer	years in service	Website/Email	0.3741				
		word of mouth	0.2489				
		firefighter referral	0.1015				
		being asked by a firefighte	0.048				
		community events	0.044				
	age	Being asked by a firefighte	0.1304				
		website/Email	0.2023				
		word of mouth	0.1881				
		firefighter referral	0.0752				
		other	0.1371				
career	years in service			Facebook	0.2556	word of mouth	0.2683
						school visit	0.1468
	age					word of mouth	0.3929
						Facebook	0.1674
						school visit	0.1458
both	years in service			Facebook	0.5416	word of mouth	0.225
	age			Facebook	0.5051	word of mouth	0.3056

Q18/43. What is your PRIMARY motivation to continue as a firefighter?							
occupation	category	Positive relationship	relative importance value	negative relationship	relative importance value	no relationship	relative importance value
volunteer	years in service			Career experience	0.4611	Appreciation from people	0.1544
						other	0.1127
	age			Career experience	0.4622	Other	0.1306
				adrenaline rush	0.2078		
career	years in service			family connection	0.0999		
		Administrative duties	0.432			Career experience	0.3547
						retirement benefits	0.122
	age	Administrative duties	0.4011			Career experience	0.2557
						retirement benefits	0.1833
both	years in service			Career experience	0.7128		
	age			Career experience	0.5997		
				fire response	0.3175		

Q25/50. At what level do negative leadership issues exist? Select all that apply							
occupation	category	Positive relationship	relative importance value	negative relationship	relative importance value	no relationship	relative importance value
volunteer	years in service					Chief	0.6856
						other	0.202
	age					Chief	0.3558
						firefighter	0.3179
career	years in service					Chief officer	0.3503
						company officer	0.304
						firefighter	0.2618
	age					Firefighter	0.4121
						other	0.3477
						company officer	0.189
both	years in service					Firefighter	0.3679
						other	0.3102
						company officer	0.2161
	age					Other	0.4731
						company officer	0.39
						firefighter	0.1118