

ASSESSING MEMBER SATISFACTION  
WITHIN THE VOLUNTEER FIRE SERVICE  
IN SOUTH CAROLINA

By

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Abstract: This dissertation examines satisfaction levels among volunteer firefighters. In 1985, there were 838,000 volunteer firefighters in the United States. This number dropped to below 756,000 in 2011. Because only eight percent of fire departments in the United States do not utilize volunteer firefighters, reversing the decline in the number of volunteer firefighters is essential to the safety of the public and other firefighters. This study utilized a mixed methods approach to determine what motives exist for those to join the volunteer fire service, how these motives alter and map to expectations for continued service, and how well volunteer departments are meeting these different expectations. A snowball sample completed interviews and concept maps, which enabled the study to identify the widest breadth of factors involved. Then a random, representative sample of volunteer firefighters in the State of South Carolina completed a survey to evaluate the importance of motives and expectations as well as satisfaction levels and projected end of service. Regression analysis determined what factors have an influence on a volunteer firefighter's service length. Results determined that there is no long-term connection of service length associated with initial motives to join. Overall, volunteer firefighters join with naïve motives that become informed expectations to continue service. These expectations are mainly values and enhancement factors such as helping others, civic responsibility, serving as a role model, being a member of valued public service and a feeling of accomplishment, but also include a few understanding and social factors such as obtaining training and fellowship. This research also concluded that fire departments are doing well at meeting volunteers' expectations and providing them satisfaction. Despite this conclusion, improvements are necessary. Satisfaction from values factors, years of service, gender, population type served, and equipment (such as light, siren, radio) in a volunteer's personal vehicle have a statistically significant influence on eventual service length, while satisfaction from enhancement factors, intermittent service, race, and career motives to join have a marginally significant influence. From a practical standpoint, this study offers recommendations that fire service leaders can use to improve volunteer recruitment and retention.

## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
The State of the Volunteer Fire Service.....	1
Historical Emphasis on Volunteerism .....	1
Present Day Challenges to the Volunteer Service .....	3
The Difference Between Motives and Expectations.....	4
The Effort to Understand the Motives of Volunteers .....	5
The Debate over Extrinsic and Intrinsic Rewards .....	5
The Established Expectations of the Fire Service.....	7
Research Questions and Analysis .....	9
Mixed-Methods Approaches.....	10
II. THEORY AND HYPOTHESES .....	12
The Enduring Needs of Volunteers for Fire Protection.....	12
Career and Volunteer Firefighters .....	13
The Institutional Structure of the Fire Service.....	15
Fully Paid Departments.....	16
Predominantly Paid Supplemented by Volunteer .....	16
Predominantly Volunteer Supplemented by Paid.....	17
Wholly Volunteer Fire Departments.....	17
Understanding Voluntary Institutions.....	17
Motives, Expectations, and Satisfaction .....	19
The Motives of Volunteer Firefighters .....	19
Conceptualizing Motives .....	19
The Generic Motives of Volunteers.....	21
Clary, et al. Six Generalized Motives .....	22
Values Motive.....	22
Understanding Motive .....	24
Career Motive .....	26
Social Motive .....	27
Protective Motive.....	30
Enhancement Motive .....	32
The Motives of Volunteer Firefighters .....	35
The Expectations of Volunteer Firefighters.....	37
Conceptualizing Expectations.....	37
The Generic Expectations of Volunteers .....	37
The Expectations of Volunteer Firefighters.....	39
The Satisfaction of Volunteer Firefighters .....	41
Conceptualizing Satisfaction .....	41
The Generic Satisfaction of Volunteers.....	42

Chapter	Page
The Satisfaction of Volunteer Firefighters .....	45
Synthesis .....	47
Formal Hypotheses .....	49
Alternative Explanations.....	50
III. RESEARCH DESIGN .....	51
Taking a Mixed Methods Approach .....	52
Qualitative Methods.....	53
Quantitative Methods.....	54
Population of Study.....	55
Qualitative Approach to Understanding Firefighters' Motives to Join .....	57
Snowball Sampling Technique .....	57
Concept Mapping Exercise for Motives to Join .....	60
Qualitative Motives Analysis.....	62
Quantitative Approach to Understanding Firefighters' Motives to Join .....	63
Random Sample Derivation.....	64
Census / Sampling Issues and Adjustments.....	66
Recording Responses to the Survey Instrument .....	69
Quantitative Motives Analysis.....	69
Qualitative Approach to Understanding Firefighters' Expectations to Serve .....	70
Concept Mapping Exercise for Expectations to Serve .....	71
Qualitative Expectations Analysis .....	72
Quantitative Approach to Understanding Firefighters' Expectations to Serve .....	73
Querying Expectations.....	73
Quantitative Expectations Analysis .....	73
Qualitative Approach to Satisfaction and Retention.....	74
Concept Mapping and Satisfaction .....	75
Qualitative Satisfaction Analysis.....	76
Quantitative Approach to Satisfaction and Retention.....	77
Quantifying Satisfaction .....	77
Satisfaction versus motive import.....	78
Satisfaction versus expectation import .....	79
Modeling the Retention Calculation .....	80
Estimation Strategy and Weighting .....	82
Model Specification.....	83
Controlling for Alternative Explanations of Retention.....	85
Controlling for Age and Years of Service .....	85
Controlling for Institutional Characteristics .....	87
Controlling for Respondent Characteristics.....	89
Controlling for Socialization, Risk and Selective Benefits .....	89
Understanding Motives, Expectations, Satisfaction and Retention .....	92

Chapter	Page
IV. UNDERSTANDING VOLUNTEER FIREFIGHTERS' MOTIVES TO JOIN	112
Qualitative Approach to Understanding Firefighters' Motives to Join	112
Sample Comparison	112
Individual Responses	113
Values Motives	114
Enhancement Motives	117
Understanding Motives	121
Social Motives	122
Protective Motives	127
Career Motives	128
Miscellaneous Motives	130
Qualitative Categories of Joiners	131
Family Firefighter	131
Altruist	132
Excitement/Risk Junkies	133
Learners	134
Aggregate Motive Concept Maps	136
Quantitative Approach to Understanding Firefighters' Motives to Join	139
Introduction to Quantitative Survey Instrument	139
Aggregate Motive Importance	140
Institutional Differences	149
Demographic Differences	150
The Mixed Methods Approach and Determining the Categories of Joiners	156
Family Firefighters	157
Excitement/Risk Junkies	157
Learners	158
Altruists	158
Chapter Conclusions	160
V. UNDERSTANDING VOLUNTEER FIREFIGHTERS' EXPECTATIONS TO CONTINUE SERVICE	197
Qualitative Approach to Understanding Firefighters' Expectations to Serve	197
Individual Responses	198
Values Expectations	198
Enhancement Expectations	201
Understanding Expectations	204
Social Expectations	206
Protective Expectations	208
Career Expectations	210



Chapter	Page
Miscellaneous Expectations.....	212
Qualitative Categories of Joiners.....	213
Aggregated Expectation Concept Maps.....	216
Quantitative Approach to Understanding Firefighters' Expectations to Continue	
Serving.....	222
Aggregate Expectation Importance.....	222
Alteration of Motives into Expectations.....	225
Institutional Differences.....	227
Demographic Differences.....	229
Quantitative Categories of Joiners.....	234
Chapter Conclusions.....	237
VI. UNDERSTANDING VOLUNTEER FIREFIGHTERS' SATISFACTION AND	
RETENTION.....	270
Qualitative Approach to Understanding Volunteer Firefighter Satisfaction and	
Retention.....	270
Individual Responses.....	271
Values Satisfaction.....	271
Enhancement Satisfaction.....	274
Understanding Satisfaction.....	275
Social Satisfaction.....	277
Protective Satisfaction.....	278
Career Satisfaction.....	279
Miscellaneous Satisfaction.....	279
Qualitative Categories of Joiners.....	280
Family Firefighter.....	280
Altruists.....	281
Excitement/Risk Junkies.....	281
Learners.....	282
Aggregated Expectation/Satisfaction Concept Maps.....	283
Quantitative Approach to Understanding Firefighters' Satisfaction.....	287
Aggregate Expectation Satisfaction.....	287
Institutional Differences.....	293
Demographic Differences.....	295
Quantitative Categories of Joiners.....	299
Family Firefighters.....	300
Altruists.....	300
Excitement/Risk Junkies.....	300
Learners.....	301
The Effects of Satisfaction upon Volunteer Retention.....	301
Disaggregated Components (Models One, Two and Three).....	302
Years of Service.....	307

Chapter	Page
Institutional Factors .....	308
Demographic Factors .....	309
Other Volunteer Characteristics – Light Bars and Radios.....	311
Aggregated Components (Models Four through Seven) .....	312
Model Results and Magnitude of Effects Summary .....	313
Chapter Conclusions .....	315
VII. CONCLUSIONS AND RECOMMENDATIONS.....	344
The Problem.....	344
The Questions .....	344
Research Design.....	345
The Answers .....	346
What Motives exist for those to join the volunteer firefighting service? .....	346
How do these motives alter and map to expectations for continued service?.....	348
How well are volunteer departments meeting these different expectations?.....	350
Results of the Retention Analysis .....	352
The Big Picture .....	355
Practical Implications.....	359
Suggestions for Future Research .....	361
REFERENCES .....	364
APPENDICES .....	381

## LIST OF TABLES

Table	Page
3.1 – South Carolina / United States Census Demographic Comparisons .....	99
3.2 – Proportionate Stratified Sampling Frame .....	100
3.2 – Proportionate Stratified Sampling Frame (Maximum Actual Numbers).....	101
3.4 – Disaggregated Satisfaction Measurement from Disaggregated Responses ...	102
3.5 – Direct Satisfaction Measurement Versus Motive Import .....	103
3.6 – Relative Satisfaction Measurement Versus Motive Import .....	104
3.7 – Direct Satisfaction Measurement Versus Expectation Import.....	105
3.8 – Relative Satisfaction Measurement Versus Expectation Import .....	106
3.9 – Combined Service Length Measurement Calculations .....	107
3.10 – Weighting Calculations for OLS .....	108
3.11 – Institutional Variables.....	109
3.12 – Respondent Characteristic Variables .....	110
3.13 – Socialization, Risk, and Selective Benefits Variables .....	111
4.1 – Qualitative/Quantitative Sample Comparison .....	190
4.2 – Clary, et al. (1998) Factor and Qualitative Individual Responses .....	191
4.3 – Clary, et al. (1998) Factors and Associated Response Item .....	192
4.4 – Individual Quantitative Motive Importance Responses.....	193
4.5 – Quantitative Survey Responses by Clary, et al. (1998) Factor .....	194
4.6 – Quantitative Motive Importance by Institutional Control Variable.....	195
4.7 – Quantitative Motive Importance by Demographic Control Variable .....	196
5.1 – Factor and Qualitative Individual Responses .....	263
5.2 – Quantitative Individual Expectation Importance Responses .....	264
5.3 – Quantitative Survey Coded Responses by Expectation Factor.....	265
5.4 – Quantitative Individual Motive / Expectation Importance Response Comparison .....	266
5.5 – Quantitative Survey Coded Responses Motive/Expectation Comparison by Factor .....	267
5.6 – Quantitative Expectation Importance of Factors by Institutional Control Variable.....	268
5.7 – Quantitative Expectation Importance of Factors by Demographic Control Variable.....	269
6.1 – Individual Quantitative Satisfaction Responses.....	336

Table	Page
6.2 – Individual Quantitative Expectation Importance/Satisfaction Response Comparisons .....	337
6.3 – Quantitative Satisfaction Responses by Factor.....	338
6.4 – Quantitative Survey Responses Expectation/Satisfaction Comparison by Factor .....	339
6.5 – Quantitative Satisfaction Factors by Institutional Control Variable.....	340
6.6 – Quantitative Satisfaction by Demographic Control Variable .....	341
6.7 – Weighted Least Squares Estimates of Anticipated Service Period – Disaggregated Components .....	342
6.8 – Weighted Least Squares Estimates of Anticipated Service Period – Aggregated Components.....	343

## LIST OF FIGURES

Figure	Page
3.1 – $t_0$ Concept (Motive) Map Index Card Example .....	94
3.2 – $t_0$ Concept (Motive) Map Example .....	95
3.3 – $t_n$ Concept (Expectation) Map Index Card Example.....	96
3.4 – $t_n$ Concept (Motive) Map with Reported Satisfaction Index Card Example ...	97
3.5 – Survey Instrument Example for Collection of Motives, Expectations and Satisfaction.....	98
4.1 – Values Motives to Join ( $t_0$ ) Concept Map.....	164
4.2 – Enhancement Motives to Join ( $t_0$ ) Concept Map .....	165
4.3 – Understanding Motives to Join ( $t_0$ ) Concept Map .....	166
4.4 – Social Motives to Join ( $t_0$ ) Concept Map.....	167
4.5 – Protective Motives to Join $t_0$ Concept Map .....	168
4.6 – Career Motives to Join ( $t_0$ ) Concept Map .....	169
4.7 – Family Firefighter Motives to Join ( $t_0$ ) Concept Map .....	170
4.8 – Altruist Motives to Join ( $t_0$ ) Concept Map.....	171
4.9 – Excitement/Risk Junkie Motives to Join ( $t_0$ ) Concept Map.....	172
4.10 – Learner Motives to Join ( $t_0$ ) Concept Map .....	173
4.11 – Individual Qualitative Responses Aggregated Motive to Join ( $t_0$ ) Concept Map .....	174
4.12 – Coded Qualitative Responses Aggregated Motive to Join ( $t_0$ ) Concept Map .....	175
4.13 – Relative Importance of Motives to Join the Volunteer Fire Service in South Carolina.....	176
4.14 – Motives to Join among Respondents in Wholly Volunteer versus Mostly Volunteer Departments.....	177
4.15 – Motives to Join Among Rural, Suburban/Urban Respondents.....	178
4.16 – Motives to Join Among Respondents $\leq 43$ years of age versus Respondents $> 43$ years of age .....	179
4.17 – Motives to Join among White Males versus Non-Traditional Respondents	180
4.18 – Motives to Join Among Married versus Unmarried .....	181
4.19 – Motives to Join Among Respondents with Children versus Respondents without Children.....	182
4.20 – Motives to Join Among Respondents with $\leq 19$ years of service versus those with $> 19$ years of service .....	183
4.21 – Motives to Join Among Legacy versus Non-Legacy Respondents .....	184

4.22 – Motives to Join Among Respondents with Full-time Employment in the Fire Service versus those without Full-time Employment in the Fire Service .....	185
4.23 – Motives to Join for Family Firefighter Category of Joiner.....	186
4.24 – Motives to Join for Excitement/Risk Junkie Category of Joiner .....	187
4.25 – Motives to Join for Learner Category of Joiner.....	188
4.26 – Motives to Join for Altruist Category of Joiner .....	189
5.1 – Values Motive and Expectation Concept Maps.....	240
5.2 – Enhancement Motive and Expectation Concept Maps .....	241
5.3 – Understanding Motive and Expectation Concept Maps .....	242
5.4 – Social Motive and Expectation Concept Maps.....	243
5.5 – Protective Motive and Expectation Concept Maps.....	244
5.6 – Career Motive and Expectation Concept Maps .....	245
5.7 – Career Motive and Expectation Concept Maps .....	246
5.8 – Aggregated Individual Response Motive and Expectation Concept Map Comparison.....	247
5.9 – Aggregated Coded Motive and Expectation Concept Map Comparison.....	248
5.10 – Quantitative Motive – Expectation Comparison.....	249
5.11 – Expectations to Continue Serving among Respondents in Wholly Volunteer versus Mostly Volunteer Departments.....	250
5.12 – Expectations to Serve Among Rural and Suburban/Urban Respondents ....	251
5.13 – Expectations to Serve Among Respondents <=43 years of age versus Those >43 years of age .....	252
5.14 – Expectations to Serve Among Traditional Respondents (White Males) Versus Non-traditional Respondents .....	253
5.15 – Expectations to Continue Service Among Married versus Unmarried Respondents .....	254
5.16 – Expectations to Continue Service Among Respondents with Children Versus Respondents without Children.....	255
5.17 – Expectations to Continue Service Among Respondents with <= 19 years Of service versus those with >19 years of service.....	256
5.18 – Expectations to Continue Service Among Legacy versus Non-Legacy Respondents .....	257
5.19 – Expectations to Continue Service Among Respondents with Full-time Employment in the Fire Service versus those without Full-time Employment in the Fire Service .....	258
5.20 – Factors for Family Firefighter Category of Joiner Motive/Expectation Comparison.....	259
5.21 – Factors for Altruist Category of Joiner Motive/Expectation Comparison...260	
5.22 – Factors for Excitement/Risk Junkie Category of Joiner Motive/Expectation Comparison .....	261
5.23 – Factors for Learner Category of Joiner Motive/Expectation Comparison...262	
6.1 – Values Expectation/Satisfaction Concept Map.....	318

Figure	Page
6.2 – Enhancement Expectation/Satisfaction Concept Map .....	319
6.3 – Understanding Expectation/Satisfaction Concept Map .....	320
6.4 – Social Expectation/Satisfaction Concept Map.....	321
6.5 – Protective Expectation/Satisfaction Concept Map.....	322
6.6 – Career Expectation/Satisfaction Concept Map .....	323
6.7 – Expectation/Satisfaction Map for Family Firefighters .....	324
6.8 – Expectation/Satisfaction Map for Altruists.....	325
6.9 – Expectation/Satisfaction Map for Excitement/Risk Junkies.....	326
6.10 – Expectation/Satisfaction Map for Learners .....	327
6.11 – Qualitative Satisfaction of Individual Responses .....	328
6.12 – Aggregate Expectation/Satisfaction Concept Map .....	329
6.13 – Quantitative Expectation/Satisfaction Comparison .....	330
6.14 – Satisfaction Among Rural, Suburban/Urban Respondents.....	331
6.15 – Satisfaction Among White Males versus Non-Traditional Respondents ....	332
6.16 – Satisfaction Among Legacy versus Non-Legacy Respondents .....	333
6.17 – Satisfaction Among Respondents with Full-time Employment and Those without Full-time Employment in the Fire Service.....	334
6.18 – Satisfaction Among Categories of Joiners.....	335

## CHAPTER I

### INTRODUCTION

#### **The State of the Volunteer Fire Service**

In the United States, if someone is sick, hurt or their life and property are threatened by fire, there is likely a group of individuals that will come to help. In many cases, these individuals are not paid employees, but rather are volunteer firefighters. Across the country, only eight percent of fire departments do not use volunteer firefighters (United States Fire Administration 2013). To be sure, very few individuals give thought to who will aid them if they experience the worst day of their lives. Volunteer firefighters are the backbone of the nation's fire service and have a strong, proud tradition of helping others. Despite this historical tradition, their numbers are dwindling and that places a higher risk on citizens.

#### *Historical Emphasis on Volunteerism*

The volunteer fire service is deeply rooted within American tradition. Prior to the contemporary establishment of the professional fire service, it was the job of ordinary citizens to protect their communities from the outbreak of fire. In fact, during the early growth of the country, many prominent political leaders served as volunteer firefighters, including Founding Fathers such as George Washington and Benjamin Franklin (Lyons 1976). During that time, it literally took one spark for everyone in the community to lose everything they owned.

The common solution to this dilemma found throughout our nation's towns and cities was volunteer fire service. If for no other reason than self-preservation, fire protection was the responsibility of every citizen within the community. Government resources (infrastructure and revenues) simply were not adequate to provide professional response.

Fire Departments did not initially consist of an organization but rather utilized any able-bodied persons available to move buckets of water to the fire scene from the closest water source.



Communities later formed organizations that utilized designated residents to respond to fires. The technologies utilized to combat fire slowly changed from buckets to fire apparatus. These tools progressed from man-drawn and horse-drawn pumps of the mid-19<sup>th</sup> century to the motorized engines, pumps and ladders of the early 20<sup>th</sup> century. Despite these technological advances, the act of firefighting remained a service heavily dependent upon people. Every community needed volunteers to assist with fire suppression.

In the mid- to late 1800's, metropolitan areas and cities began employing paid firefighters. These career firefighters rely on the fire service as their sole profession and no longer converged on the scene from their respective homes and places of employment. Instead, they remained on-call at the fire station and as such offer a more efficient response.

In many cases, governments implemented paid firefighters in sufficient numbers that completely replaced their volunteers. In suburban and rural communities, however, local governments often maintain a working balance of career servants and volunteers to manage their exposure to fire outbreaks. This organizational balance of paid and volunteer firefighters is delicate. Volunteer firefighters may feel as if their paid counterparts are motivated by remuneration. Paid firefighters may feel that their volunteer counterparts do not possess the same high level of training and experience.

Above all, professional service, while faster and more reliable, is not cheap. Many communities struggle to financially support their local government's operations and it is not unusual for law enforcement and the fire department to comprise a large majority of the recurring operating costs. The natural progression from volunteer members to paid employees is the result of the establishment of an adequate tax base. In the absence of a local community's financial capability to fund paid employees, volunteers are critical to serving the people, particularly in isolated communities (Wagner and O'Neill 2012). With the exception of densely populated urban and metropolitan areas, communities will continue to rely on volunteer labor for the provision of fire services in the future.

Unfortunately, the volunteer fire service today is not what it was when George Washington and Ben Franklin were involved in it.

### *Present Day Challenges to the Volunteer Service*

Today, volunteer service as a whole is in a state of decline. Where volunteering was once an honorable way to serve others and their communities, it now must compete with prospective members' multiple jobs, their children's extra-curricular activities, and an overall lower willingness to participate by the citizens in the community. The overall national volunteer rate dropped by 1.1 percent to 25.4 percent in 2013 (United States Bureau of Labor Statistics 2014). This means that across all volunteer organizations, only one in four citizens volunteered nationwide. In 2009 however, individuals racked up an astonishing 8.1 billion hours of service (Cramer, Shelton, Dietz, Dote, Fletcher, Jennings, Nicholas, Ryan & Silsby 2010). When considering the fire service specifically, the situation is even worse.

Consistent with more general declines in volunteerism, the United States also is experiencing a steady decline of the number of citizens willing to volunteer as a firefighter, where despite years of professionalization, the demand for volunteers remains high. According to Karter & Stein (2012), 1,100,450 firefighters were active in the United States in 2011, and of these, nearly 69% or 756,400 of those were volunteers. Yet other statistics show that the numbers of volunteer firefighters has dropped to its lowest recorded value in the last quarter of a century. In fact, since 1985 when the numbers of volunteer firefighters were 838,000 nationwide, volunteer firefighters have declined by over ten percent.

This may seem trivial but consider the 32 percent increase in population during the same period. One must also consider the continuing reach of urban sprawl. Since 1950, the populations of United States cities have remained relatively stagnant while suburbs and rural areas have experienced sharp increases in population (Nechyba & Walsh 2004). Volunteer firefighters are much more likely to serve these suburban and rural areas, either wholly or in part. Even those urban residents protected by professional public servants are, at the minimum, likely to visit nearby suburban areas routinely

served by fewer numbers of volunteers. Thus, this decline represents a significant threat to the safety of all Americans and is one that we need to better understand and counteract.

While this decline may not affect those growing metropolitan areas that maintain adequate financial resources to add career firefighters to compensate for the loss of volunteers, most suburban and rural communities must now provide these same services to their communities, often with smaller staffs. Many fire service managers have recognized this critical decline in volunteer service, but, with respect to its origins, little consensus has been found. The National Volunteer Fire Council (2004) suggests that volunteer firefighters find that their service demands limit the time they have available to spend with their families. Current economic conditions often require those who consider sacrificing their time without compensation to hold more than one job to support their families, making service a significant challenge for many. In fact, those who are willing to participate in the blue-collar work of firefighting likely hold blue-collar jobs, which pay significantly less and may require a second or third job to supplement their income. Furthermore, the distance one must travel for their primary job may be significant, limiting the amount of time they have available to volunteer. In many cases, potential volunteers with children may find their children's schedule more hectic than their own. Additionally, many researchers suggest that the growth of senior citizens found in the retiring baby-boomer generation will result in increased volunteerism (Choudhury 2010). However, not everyone is physically capable of performing fire service activities. Pre-existing health conditions and age can also reduce the potential pool of volunteers.

### **The Difference Between Motives and Expectations**

The lower number of volunteer firefighters is driven by one or two factors. First, either potential candidates decide not to join or the potential candidate joins, serves for a short time, and then quits. In either case, the resultant reduced labor force ultimately affects the service the same, but this creates two distinct elements to examine. First, the motives to join must be considered and separately, the expectations to continue serving must be also understood.

### *The Effort to Understand the Motives of Volunteers*

As demonstrated, there are a number of potential explanations for the decline of the volunteer fire service. The lack of consensus on the causes is problematic. Many departments have attempted various recruitment and retention programs in an effort to increase volunteer staffing. Nevertheless, without a full understanding of the causes, solutions are simply uncalculated guesses. Instead, empirical analysis is necessary to understand the underlying causes of this decline in order to attempt to reverse it. One aspect of this dilemma involves the decision to join the volunteer fire service. One can conceptualize this decision as the motive to join.

Many authors have proposed a number of motives to join among volunteers. Perhaps participating in exciting work is a strong motive to join among volunteer firefighters. Certainly, altruism would serve to be a motive to join among those choosing to sacrifice their time, and perhaps their lives, to help others. There are solidarity benefits to belonging to the local fire department and they may serve as a motive to join. In a small community, it may serve as both a club of sorts in addition to being the emergency response organization. Learning new skills may be a motive to join among those who continually challenge themselves. Once the skills and knowledge are acquired, they may increase a volunteer's employability in the workforce. This, too, may serve as a powerful motive to join among potential volunteers.

### *The Debate over Extrinsic and Intrinsic Rewards*

Where motives to join the volunteer fire service are concerned, a debate has emerged regarding the value of extrinsic and intrinsic rewards that are designed to appeal to these different types of motives. In response, some departments have attempted to motivate volunteer firefighters by offering them some of the *extrinsic* rewards enjoyed by career firefighters. These can take the form of a pay-per-call stipend, retirement contribution, or mileage reimbursement, etc. Extrinsic rewards are related to a goal that is separate from the work (Amabile 1993). Deci and Ryan (1985) state that extrinsic motives are those that lead to a separable outcome. Extrinsic rewards, given their tangible nature, are part of a transactional process. Expectancy-value theory is a historical perspective on motivation and

suggests that the choice, persistence and performance of an individual are explained by how they perceive the value in the activity and how well they will perform in the activity. (Atkinson 1957, Eccles et al. 1983, Wigfield 1994, Wigfield & Eccles 1992). This suggests that the opportunity must be meaningful and the individual must believe they will be successful before they choose to participate in the transaction of volunteering for extrinsic benefits. This transaction for any potential volunteer is simple, the costs of volunteering must be less than the benefits of volunteering.

Other volunteer fire departments do not have the financial means to offer such extrinsic rewards and may rely solely on rewards considered *intrinsic*. These can take the form of social benefits, pride, altruism, excitement, and a sense of duty. When individuals are intrinsically motivated, they are seeking enjoyment, self-expression, satisfaction of curiosity, enjoyment or personal challenge in the work (Amabile 1993). Departments that rely on intrinsic rewards may offer its members the opportunity to help others that are experiencing the worst day of their lives. Helping during this time is likely marketed as a rewarding experience that no amount of extrinsic rewards can equal. Others may offer the opportunity to experience social interactions with fellow volunteer firefighters while waiting for the next emergency to occur. This has little extrinsic value but can serve as a powerful intrinsic reward. As opposed to extrinsic rewards, intrinsic rewards are related to motives from within the individual that are directly related to the work.

Interestingly, some departments that possess the resources necessary to offer extrinsic rewards to their volunteers refuse to enact them. The dominant argument against extrinsic rewards is that they detract from those intrinsic values that are thought to be the foundation of volunteer service. For instance, one could argue that paying a volunteer firefighter alters their motivation to attend training meetings and/or to respond to incidents. On the contrary, a volunteer member that does not have adequate resources because he must work two jobs might find that these financial incentives enable them to participate in a service that is also intrinsically rewarding.

Still, many researchers claim that extrinsic rewards serve as controllers of individual behavior.

Choice and opportunity for self-direction enrich intrinsic motivation because they offer the individual

a higher level of autonomy (Zuckerman, Porac, Lathin, Smith & Deci 1978). Several studies confirm that almost every type of tangible reward, threats, deadlines, and directives undermine intrinsic motivation (Deci, Koestner & Ryan 1998; Deci & Cascio 1972; Amabile, DeJong & Lepper 1976; Koestner, Ryan, Bernieri & Holt 1984; Reeve & Deci 1996). As a result, extrinsic motivation is often in conflict with intrinsic motivation. In the former, an individual considers the instrumental value of an activity, whereas in the latter, the individual considers enjoyment of the activity. Externally motivated behaviors become more self-determined only through internalization and integration (Ryan & Deci 2000). While using both rewards may be counterproductive, some researchers argue that extrinsic motivations are not inferior to intrinsic motivations. Moreover, Ryan and Deci (2000) argue that one can be motivated by extrinsic motivations and still appreciate the intrinsic rewards. The example they provide is a student who devotes an extraordinary amount of time to studying in an effort to be admitted into the college of their choice. Their admittance is an extrinsic reward; although, the student likely still understands the value of studying and gaining knowledge, an intrinsic reward.

#### *The Established Expectations of the Fire Service*

While one aspect of understanding the decline of volunteers within the fire service is related to the study of motives to join the service, this alone is insufficient. The other necessary task is to understand the expectations of those that continue to serve. Motives to join can be thought of as a spigot filling a bucket with water. Water represents the individuals that choose to volunteer and the spigot represents their motives to join. The bucket then represents the expectations that each individual possesses to continue service. Those that join the volunteer fire service do not continually increase the labor force if they do not remain engaged. We may fully understand the motives, but without understanding their expectations for continued service, we will constantly be trying to fill a bucket with a large hole in the bottom of it. In fact, given the large training curve involved in the fire service, it may be better, in the short term, to understand expectations to serve and prevent the leakage of existing well-trained and experienced volunteers.

As previously established, motives to join are largely naïve. No one can fully appreciate or know what to expect when they join the volunteer fire service. Once they serve, expectations are developed that may diverge sharply from their motives to join. Plainly, what keeps the volunteer serving may be much different from what brought them there. These informed expectations that develop as a result of service must be understood in order to retain existing volunteers.

Determining what makes volunteering, as a firefighter, satisfying is an elemental component of successful retention efforts. One can conceptualize the sequence of motives, expectations and level of satisfaction by examining other high-risk activities. Barlow, Woodman, and Hardy (2013) found that a sensation function of participation motivates skydivers. That motivation will lead participants to engage in risk – jumping out of a plane – with an expectation that they will gain the experience of a falling / flying / possibly crashing sensation while participating. Participants feel satisfaction by realizing the expectation of the sensation(s) while engaging in the activity or event.

Quite simply, naïve motives bring volunteers to the fire service organization, expectations are what they learn through indoctrination and participation in the organization, and satisfaction of these expectations is what will keep them in house within the organization. The extent to which the individual's expectations are met will drive an individual's satisfaction level and their willingness to continue serving. When considered a social interaction, becoming a volunteer firefighter may not only be a function of self-interest. Instead, there may be underlying assumptions or expectations that one who becomes a volunteer wants fulfilled (Aksoy & Weesie 2012). An individual's expectations must be satisfied in order for the individual to remain engaged and the individual and organization to be successful, much like a student that selects a particular university (Dover 1982).

Using an extrinsic reward perspective, consider a volunteer who has an expectation of receiving a pay-per-call stipend that their local department offers. The individual's expectation just after they join could be to earn a substantial amount of money, perhaps even a level that is equivalent to part-time employment. If the volunteer firefighter finds after they serving for a time in his local department that he is not earning much, then the service has not met their expectations. The

inevitable dissatisfaction will build and in time is likely to lead to disengagement from the organization.

In this example, it is possible that a volunteer could join the fire service in pursuit of extrinsic (monetary) rewards and remain engaged in the department even if they find the organization does not fulfill their expectation of monetary rewards. Perhaps, after serving for a period, the volunteer will consider the self-actualizing, altruistic, and other intrinsic benefits satisfying enough to remain in service. If so, the volunteer's expectations will have changed during their years of service to the organization. This type of initial frame and subsequent drift is important for us to understand if we are going to prevent further declines within the ranks of the volunteer service.

It makes sense that volunteers' expectations may systematically differ based upon the institutional structure of these departments. As social science literature tells us, rules do in fact matter (North 1990). Volunteer firefighters serve in departments staffed either wholly by volunteers or by a combination of volunteers and career personnel. This structure almost certainly affects members' goals.

In some cases, volunteer ranks merely act to supplement significant numbers of career personnel. In such instances, any declines in volunteer service can be counteracted through a redistribution of existing resources. In a greater number of cases, however, the loss of volunteers takes place in contexts where resources are comparatively scarce. As such, this research will examine only wholly volunteer departments, mostly volunteer departments or where the threats of decline are most severe.

### **Research Questions & Analysis**

This research on wholly and predominantly volunteer departments will address the following research questions:

- 1) What *motives* exist for those to join the volunteer firefighting service?
- 2) How do these *motives* alter and map to *expectations* for continued service?
- 3) How well are volunteer departments meeting these different *expectations*?



By developing systematic insights for each of these questions, it then becomes possible to evaluate recruitment and retention strategies with the further intent of recruiting those most likely to stay within the service and also stemming the losses of current volunteer firefighters.

### *Mixed-Methods Approaches*

To ensure the feasibility of this study, it will concentrate on the motives and expectations of South Carolina volunteer firefighters. It adopts a *mixed-methods* approach to these core research questions. Naturalists and interpretive constructionists argue one cannot directly measure reality. Rather, reality is perceived and interpreted differently by each person and is always subjective (Rubin & Rubin 2012). This argument tends to favor the use of qualitative research. Qualitative methods in fact do provide a richer, deeper, and more holistic understanding of the multiple perceptions of reality. Positivists on the other hand claim that there is only one reality and that it is both objective and measurable. Positivists frequently employ quantitative methods to find the single universal truth that, as long as specified conditions are met, is always true (Rubin & Rubin 2012). In recent years, *mixed-methods* have emerged to solve the struggle between qualitative and quantitative methodologies. Johnson and Onwuegbuzi (2004) state that mixed methods have joined qualitative and quantitative methods to create three major research paradigms. The mixed methods paradigm serves to respect both qualitative and quantitative methodologies and work between the two while employing the benefits of each (Wilson 2013). Johnson, Onwuegbuzie, and Turner (2007) agree stating that mixed methods research considers multiple viewpoints and perspectives. Additionally, mixed methods always consider both qualitative and quantitative research standpoints. This research will utilize mixed methods in order to consider both the naturalist and positivist points of view. First, qualitative methods will be used to assess the range of possible initial motives and contemporary expectations that exist for the volunteer fire service. The results of the qualitative analysis will inform the creation of a survey instrument designed to provide empirical leverage about motives, expectations and levels of satisfaction among volunteer firefighters in South Carolina. For research questions one and two, both qualitative and quantitative analysis will be used to derive

conclusions about motives to join the volunteer fire service and how these naïve motives map to informed expectations. The third question, although informed by the previous qualitative analysis, utilizes only quantitative analysis to draw conclusions regarding how well volunteer departments are meeting these expectations.

## CHAPTER II

### THEORY AND HYPOTHESES

#### **The Enduring Need of Volunteers for Fire Protection**

Although the post 9/11 fire service has become responsible for many additional types of emergencies, none is more time and labor intensive than the traditional role of extinguishing fires. To this end, some jurisdictions, namely urban ones, employ scores of career firefighters. As Karter (2006) notes, however, the increase in career firefighters has not overcome an ongoing decline in the numbers of volunteer firefighters. Of the estimated 30,300 fire departments in the United States, volunteers solely staff 71.2%. In fact, only 8% of fire service jurisdictions do not utilize any volunteers (Karter 2006).

All citizens of the United States require adequate protection from fire and volunteers must provide these services in the absence of a sufficient tax base to pay career firefighters. Hall (2012) shows us that 80% of U.S. population resides in 20% of the available geographic footprint. Concomitantly, the remaining 20% of the population is widely dispersed over 80% of a rural topography. This, of course, means that most of the country has an arguably thin tax base from which to provide anticipated public services.

The geographic dispersion of the populace thus represents a daunting task for fire prevention and

response. Whereas, a citizen living in an urban area can expect to have a fire engine arrive within three minutes of calling 9-1-1 with at least four firefighters on the apparatus. A citizen living in a remote rural area should anticipate an extended waiting time, and if current trends continue, an inadequate number of firefighters will answer the call.

The numbers of volunteer firefighters throughout the United States are in a steady state of decline, which places considerable pressure on fire chiefs and administrators who must strategically approach staffing needs. These volunteers represent a large majority of the American firefighting force and their service saves taxpayers over \$100 billion each year (Hall 2012). Nevertheless, like any matter of public policy with monetary implications of this size, the issue is far from clear-cut. For as much as the interests of career and volunteer firefighters may be conjoined when serving together in an emergency, their interests are much more complex upon returning to the firehouse and going back to their respective day-jobs.

### **Career and Volunteer Firefighters**

In some sense, the ongoing decline in the volunteer service can be seen as an externality of other labor and employment policies. Career personnel previously constituted at least some of the ranks of volunteer fire departments – these professionals would work full-time in one jurisdiction and volunteer in another. The Fair Labor Standards Act has long prohibited volunteer firefighters from offering their services for free to the same jurisdiction that pays them (National Volunteer Fire Council 2004).

In 1993, the paid firefighters of Montgomery County, MD lost overtime wages due to paid firefighters from other departments volunteering within their district during off duty time. The affected Montgomery County firefighters filed complaints with the Department of Labor. The resulting ruling, encouraged by the International Association of Firefighters (IAFF), an American Federation of Labor-Congress of Industrial Organizations (AFL-CIO) affiliate, was that volunteer firefighters could no longer volunteer within the same government agency or for any quasi-governmental organization that would benefit similarly (Walters 1996).

Although the Fair Labor Standards Act prevents an employee from being paid and volunteering for the same organization, some fire districts have misread this requirement as preventing career professionals from volunteering in other unrelated districts. Employers also must consider that their employee could be injured while volunteering off-duty. The level of risk to their employees is likely equally as high if not greater when volunteering, given that their employees may be volunteering at a department where equipment and required training levels are substandard. A firefighter injured while volunteering places a burden upon his or her full-time district and thus the professional fire service has few incentives to be lax with their policies on volunteerism. Further exacerbating the loss of career-volunteer firefighters are the internal policies of collective bargaining units. For example, the IAFF has actively barred its card-carrying members from volunteering regardless of circumstances and jurisdiction (Campbell 1997). These politically charged issues have further reduced the number of well-trained firefighters available to volunteer in the same capacity elsewhere.

Given the general decline in volunteer fire service and the institutional barriers posed by local authorities and bargaining units, the operation of volunteer departments in the United States is threatened. Simply put, without attention to the recruitment and retention of new volunteers, these departments that protect extended regions of developed and undeveloped territory, are not going to be able to perform at an adequate level, leaving the alternative of expending greater public resources toward career service.

Although career service is in many ways superior, it is critical to grasp the financial stakes involved. According to Hall (2012), the monetary value of time donated by volunteer firefighters was \$129.7 billion in 2009. Comparatively, the aggregate cost of fire protection services in 2009 was slightly less at \$115.1 billion. This latter figure represented a 56% increase versus the 1980 value (i.e., taking into account inflation adjustments). Therefore, fewer volunteers would add to an already rapidly growing cost base for fire safety services.

Given that the federal government already faces historical budget deficits that encourage passing off obligations onto state and local governments, the public collectively cannot afford to further burden these localities with the additional financial demands necessary to meet basic services such as fire protection. In short, if we do not assess and stem the incremental losses within the ranks of volunteer firefighters, we risk substantially adding to the otherwise growing burdens on local governments.

### **The Institutional Structure of the Fire Service**

The institutional structure of communities' fire protection services vary according to their inherent risk profiles. In general, community specific needs will drive the type and amount of fire protection provided. Hall (2012) suggests that organizations often begin with a response time objective, consider travel time, and travel distance. In rural settings, where most volunteer firefighters work, small populations are distributed across a large geographic area. Such spaces demand additional fire stations, which increases the demand for volunteer firefighters.

Population density strongly influences the type of firefighters (paid versus volunteer) that a community relies upon. The institutional structure of the both urban and rural fire departments can be categorized in one of four types of institutional structures: 1) fully paid; 2) predominantly paid supplemented by volunteer; 3) predominantly volunteer supplemented by paid; and 4) wholly volunteer.

The community being served and available resources will drive the demand for a particular institutional structure. Brunet, DeBoer, and McNamara (2001) show that the demand in wealthier communities may be different from less affluent communities. A wealthier community may require the protection of more valuable property and have the ability to pay for greater fire protection. This greater level of fire protection may come in the form of paid firefighters who are on duty as opposed to relying on volunteer firefighters. Many communities use both career and volunteer firefighters. Numerous career firefighters aid with direction and training of volunteers and are available for responses during the weekdays when volunteers are not. In many cases,

without the support of career firefighters, volunteer firehouses may be unable to respond during weekdays (Campbell 1997). Regardless of the type of firefighters used, communities are aware that firefighters face violence and danger on a routine basis. As a result, there is a special place in the public's hearts for firefighters (Regehr, Dimitropoulos, Bright, George, & Henderson 2005). Nonetheless the fact that firefighting is innately hazardous makes attracting volunteers much more difficult when compared to other volunteer opportunities.

#### *Fully Paid Departments*

Heavily populated urban areas normally rely on fully paid departments wherein every firefighter is a full-time employee and is required to work at the station for a specified shift. Heavily populated urban areas typically do not utilize volunteer ranks. In highly dense urban areas, where expectations of service are quite high, volunteer firefighters simply are not feasible. Financial resources otherwise exist for professional departments and collective bargaining units resist the practice. The only real alternative for the use of volunteer firefighters would be to require them to be on call in a fire station (similar to the paid personnel). Although this technically is a feasible use of volunteer service, the training requirements of most urban fire departments generally make the use of volunteer firefighters difficult to impossible.

#### *Predominantly Paid Supplemented by Volunteer*

In suburban communities, both paid and volunteer personnel make up the fire department. If a department has a high call volume and provides a myriad of services, most often, it will predominantly be made up of paid personnel. In this case, paid personnel far outnumber the volunteers within the department. Volunteer personnel simply supplement the paid personnel. Given that paid personnel primarily staff the department, the citizens that the fire department serves expect a higher level of service, in terms of short response times and the response of an adequate number of personnel to handle the emergency. Furthermore, paid personnel may handle several types of incidents that require minimal personnel (emergency medical incidents, motor vehicle collisions) without utilizing volunteer personnel at all.

### *Predominantly Volunteer Supplemented by Paid*

In lightly populated suburban and rural communities, volunteer personnel significantly exceed the number of paid personnel. These departments typically have lower call volumes that can be met without the widespread use of paid personnel. They may also provide a lower level of services and not take on responsibilities for emergency medical services, hazardous materials mitigation, and/or rescue services. Often paid personnel will drive fire department apparatus to emergency scenes. Volunteer personnel will then respond directly to the scene in their personal vehicles or report to the station to respond on an additional apparatus. Citizens may still have the perception of effective service due to the relatively quick arrival of a fire department apparatus. However, because paid personnel supplement the volunteer personnel, a response without volunteer personnel can become ineffective operationally. A lone paid firefighter on a fire department apparatus that arrives at an emergency incident often is not sufficient to handle even the smallest incident types. Volunteer firefighter participation is paramount for successful operations in fire departments of this institutional structure.

### *Wholly Volunteer Fire Departments*

Wholly volunteer fire departments obviously are those that do not use paid personnel in any operational capacity. In a few cases, these departments may retain a paid chief, director, or coordinator position. However, the department will depend on volunteer participation for response and operations. Smaller, rural areas with low populations typically utilize departments with this type of institutional structure. These departments are associated with low call volumes and provide a minimal level of services – frequently just fire suppression. Due to its singular reliance on volunteers and the fact that these firefighters have other responsibilities, it is possible that a request for response could go unanswered. At a minimum, citizens in an area served by a wholly volunteer fire department expect longer response times, but too often they may not get adequate support.



### *Understanding Voluntary Institutions*

This research considers only volunteers existing in either predominately volunteer or wholly volunteer institutional structures. The fire service in urban and metropolitan areas does not suffer from a lack of firefighters. The tax bases in these areas provide for a specific number of paid positions. When one employee leaves, another is hired to fill the vacancy. Unfortunately, as this research has demonstrated, these urban and metropolitan areas represent very small geographic areas of the United States. Although these urban and metropolitan fire departments may complain of insufficient numbers, there is no comparison to rural America. Rural citizen complaints may not be that insufficient numbers of firefighters responded from the local fire station, but perhaps the complaint is that no firefighters responded from the local fire station. In areas of the country where solely volunteers provide service, there are countless occasions documented in the media where a department is requested to respond and no one did. Usually the next closest fire station is dispatched to handle the emergency. Unfortunately, this takes time. Sadly, there are times in some areas of the United States where a fire station sits idle with the appropriate equipment for the emergency housed inside its walls, while another fire station further away passes that fire station and arrives much later to handle the emergency. Urban and metropolitan community members rarely have a complaint that no one responded from the closest fire station due to the paid staffing present. Citizens in the remainder of the country rely on volunteer firefighters in some manner. At the very least, volunteer firefighters support paid personnel in providing fire and life safety services. In the large majority of communities, volunteer firefighters may provide the primary or only source of fire and life safety protection. It is this institutional structure that requires the closest examination. Where volunteers only support paid personnel, a reduction in volunteers may be offset by an increase in paid personnel. There is a significant cost associated with this increase to the community and its taxpayers, but it is nevertheless possible. In communities where the institutional structure is predominantly or wholly volunteer, there is usually no sufficient tax base to increase paid personnel. When the

number of volunteers decrease, both the citizens and the remaining volunteer firefighters are put at risk. For these communities, reversing the trend of declining volunteer firefighters is unquestionably a matter of life and death.

### **Motives, Expectations, and Satisfaction**

Given our reliance on volunteer firefighters, and the ongoing and projected decline in their numbers, it is imperative that we gain a sense of what factors are associated with their recruitment and retention. This dissertation will use social science methodology to draw inferences about these unknown factors, but it is crucial to erect a useful framework to understand the particular context of this research question.

In this analysis, I will be invoking three particular concepts to understand the path of volunteer service in the form of: 1) *motives*; 2) *expectations*; and 3) *satisfaction*.

### **The Motives of Volunteer Firefighters**

Although retention efforts are important to maintain the current ranks of volunteer firefighters, retention is only a short-term solution. For the long term, the motives of volunteers to join the fire service must be meticulously examined. Understanding these motives to join will enable communities to overcome this overall decline of volunteer firefighters far into the future.

#### *Conceptualizing Motives*

A motive can be thought of as an initial driving force that encourages an individual to engage in some form of behavior. For instance, when investigating crime, law enforcement officials will attempt to determine a suspect's motive or the reason they engaged crime. Motive, therefore, is the reason an individual chooses to perform an act or their strategy of action (Mills 1940; Dwyer, Bono, Snyder, Nov, & Berson 2013). The key to understanding a motive is to consider it in sequence. A motive must first be present for the individual to act. A reason must first be present before the individual chooses to engage in the act.

This motive, or reason, can be related to a host of internal and external factors. Consider the aforementioned criminal activity. One who commits a robbery may be motivated internally by

the thought that they will not be caught in the act. Externally, the reason an individual commits a robbery may be to obtain assets that are not rightfully theirs. The critical aspect to understand is that the initial place of the motive makes it take on a naïve quality. In the case of the criminal, the internal belief that he will not get caught may prove to be wrong, while the external promise of rewards may be fruitless (i.e., the safe might be empty).

The word motive, whether used by criminal detectives, psychologists, or social scientists, is synonymous with a reason (Scheer 2001). The reason someone joins the volunteer fire service is multi-faceted. Consider Schmid's (2002) work, which posits that social actions are the result of three possible motives: sympathy, norm, or reward. Those that serve to help others in their time of need likely have a high level of sympathy. In small communities where the fire service is made up of family and close friends, service may be a matter of ethical action (norm). In the case of the third motive, serving may derive a self-serving reward. People may also have mixed motives and may be driven to join the volunteer fire service by a combination of factors (Jordan & Munasib 2006).

Furthermore, motives to join the volunteer fire service are naïve and malleable. Those that watch a fire truck drive by with lights flashing and sirens blaring likely naively assume that the firefighters are on the way to rescue a disabled child from a burning building. They likely do not think that the fire truck may be on the way to a patient that they have seen twice already that day and is complaining of hiccoughs. Nor do many consider the countless number of hours firefighters spend in training, cleaning and checking equipment and readying apparatus to respond to emergencies. By comparison, the time spent on actual emergencies is dwarfed by the time preparing to respond to emergencies. Herein lies the problem with motives. Those that decide to volunteer so that they can rescue the disabled child from a burning building may never get that opportunity. Therefore, identifying the motives to join among potential volunteer firefighters is essential. Marketing the service to meet those motives, wherever possible, and

informing candidates of what serving really encompasses will help to reduce the naivety of those that choose to join.

### *The Generic Motives of Volunteers*

An individual's decision to volunteer as a firefighter parallels the decision to undertake any other volunteer opportunity. At an elemental level, the key aspect of a motive for volunteer service is that it must be free of coercion, moral or otherwise (Mendenhall 2009). Volunteers by definition have a choice and must be able to freely choose to participate in an organization. If an individual considers the volunteer opportunity a leisure activity, the individuals must be free to accept or reject the opportunity on their own terms. Where remunerated services are considered in the form of the volunteer receiving a stipend, mileage reimbursement or other financial compensation, this may not be considered free decision. The conscious choice to fulfill self-development wants in lieu of financial needs implies the free choice. Otherwise, the volunteer opportunity may not be one where individuals can enter and exit at will (McAllum 2014).

Motives in the context of volunteerism are generated internally and can be affected by a wide range of external influences. As a result, a wide range of variance in motives may exist.

Theoretically, 50 volunteers could have 50 different motives for participation. The task of this research is to systematically find the most frequently occurring motives within the context of the volunteer fire service.

McKee (2012) proposes that many retirees find that volunteering in soup kitchens, libraries, homeless shelters, and by serving on local and national organizational boards makes them happier with lower levels of depression and heart disease. Nonetheless, retirees may not be in sufficient physical condition to perform the strenuous activities associated with firefighting.

Research shows that young adults consider the type of volunteering activity to be the single most important factor, with health-care settings, child and education organizations and poverty-focused organizations being the most common setting (Garver, Divine, Spralls 2009). Engaging these young adults to volunteer will likely require a different approach than what has been used in the

past, such as the use of technology and social media (Nicol 2012). Physically speaking, college students would be primed to perform the physical tasks associated with firefighting. Though many think they would make good volunteer firefighters, when using students from your local college or university, you must anticipate what would likely be a high turnover rate every four years (Bowman 1998).

An individual may spend an inordinate amount of time making a decision to volunteer (Wilson 2000; Clary, Snyder, Ridge, Stukas, and Haugen 1998). Their motives or reasons for volunteering guide their decisions. It is Clary et al. (1998) that offers six general motives to volunteer. Although Clary et al. (1998) refers to these factors as motives, they are not just motives to join but are rather motivations to both join and serve. As discussed, motives to join are naïve. Volunteers in general may serve for some time before they develop an informed expectation through which satisfaction is received. Once these six motives are understood, they can be applied to any specific volunteer opportunity.

#### *Clary, et al.'s Six Generalized Motives*

Clary, Snyder, and Ridge (1992) indicate that the act of grouping respondents into motive categories may be ineffective because these individuals too often exhibit a considerable amount of overlapping variance amongst the different categories. This disparate tendency works well with the mixed methods approach that I intend to employ in this analysis. While I will be asking respondents open ended questions with the intention of mapping both their initial motives and informed expectations, I also need a starting map to draw from. In other words, I need to have a frame of reference when I start making inferences on those factors that can constitute initial motives or informed expectations. In this instance, I am going to begin with Clary, Snyder, Ridge, Stukas and Haugen's (1998) description of the six generalized motives of volunteers. These six motives were the result of their study's volunteer functions inventory which was based upon the work of Katz (1960) and Smith, Bruner, and White (1956).

### Values Motive - Concern for others / Altruism

In the initial volunteer motive category, individuals are concerned for the welfare of others. This motive is a function of an individual's underlying beliefs, in this case benevolence (Hitlin & Piliavin 2004; Schwartz & Bilsky 1990). This function maps to the concept of altruism, or the self-less need to serve others. Concern for the welfare of others and attitudes of sympathy and empathy toward people in need are personality attributes that are associated with those interested in volunteering (Eisenberg, Miller, Schaller, Fabes, Fults, Shell, & Shea 1989; Carpenter and Myers 2010; Lewis, Tenzer, & Harrison 1999). Smith (1981) in part agrees with this perspective and recommends that organizations focus on intangible rewards, while at the same time stating that altruism alone is not an incentive for voluntary action. Gidron (1983), again, largely concurs noting the predominance of intrinsic incentives over material rewards within general volunteer service. Moore, Warta, and Erichsen's (2014) research agrees stating that values and understanding (new learning experiences) motives are the strongest influences on potential volunteers.

The altruistic motive is extremely important for a service that provides intimate care to people experiencing emergencies. According to Rogers (2001), many individuals serving as a volunteer firefighter have a personal need to serve the community. Fire service organizations might potentially improve recruitment and retention of volunteers by targeting the opportunity-to-help others as a benefit to volunteering as a firefighter (Elshaug and Metzger 2001; Attard 2007). Few other volunteer opportunities allow workers to help others who are experiencing the worst day of their lives. The type of person that values altruism enough to serve as a volunteer firefighter is difficult to pinpoint. Extroverts are more likely to volunteer as a function of altruism (Graziano & Eisenberg 1997; Batson 1999; Eisenberg & Fabes 1998; Staub 1978). This is to be expected, as introverts are less likely to engage others, particularly when they are experiencing a devastating emergency.

The question remains if an individual can be attracted to volunteering primarily by a motive other than altruism. If it is possible, then perhaps altruism emerges as a primary expectation during service whenever it does not serve as a principal motive to join. The question of whether personality leads to volunteering or volunteering shapes personality has also been studied. Among adolescents, during the decision to join, positive personality characteristics are more likely to volunteer but gain limited enhancement of their personality characteristics (Atkins, Hart, Donnelly 2005; Cemalcilar 2009). This suggests, if applicable to all ages, that the behavior and feelings regarding altruism are more important when joining, given their limited ability to enhance personality during service. It is difficult to imagine a volunteer firefighter that joins to help others but later finds after serving for some time that they do not care about others. Perhaps values motives such as altruism are important in both periods. Finally, where Kahn (1992) also suggests that values motives are more likely to influence an individual to choose to volunteer, Shantz, Shaksida, and Alfes' (2014) study found that individuals are likely to dedicate more of their time to their service as a result of the same values motives. This suggests that values motives are important as a motive to join and an expectation to serve.

#### Understanding Motive - Opportunity to Learn, Practice, and Apply Skills and Abilities

Alternatively, individuals may pursue voluntary service in order to learn, practice and apply skills and abilities. This motive is akin to the need for self-actualization. In this context, the organization should intellectually challenge the volunteer, provide opportunities to develop new skills and acquire new responsibilities (Jamison 2003). While the organization has the potential to learn from the motives of new volunteers as well, providing these volunteers learning opportunities establishes a prepared, motivated, and satisfied workforce (Hustinx, Handy, & Cnaan 2010). It is important to note that volunteering based upon the understanding motive is not costless. A dedicated and committed staff and a sustained training program are necessary, all of which are costly (Raskoff & Sundeen 1999). When an individual finds that they must participate in training in which they have no interest, the costs only increase if the volunteer disengages from

the organization as a result. This requires careful planning on the part of the organization (Smith 1999).

Some scholars consider the self-actualization motive as a form of self-interest, which places it at odds with the altruistic motive. Flynn and Black (2011), however, indicate that the previously established dichotomization of altruism and self-interest is largely incorrect. Instead, they point to emergent theories of altruism and self-interest. Rogers and Maslow both studied human beings and their tendencies toward realizing their full potential, otherwise defined as self-actualization. Rogers (1951) rejected the belief of innate selfishness and suggested that human growth toward their full potential involved self-preoccupation. Mayeroff (1990) built upon this notion and proposed that one's own development and the ability to help others are directly related.

Therefore, a truly altruistic individual must also be somewhat self-focused. Maslow (1950) posited that an individual enjoys performing altruistic deeds and that this enjoyment is self-serving and leads to self-actualization. Therefore, one could reject the theory that altruism and self-interest are independent and divergent in favor of Rogers and Maslow's work.

Furthermore, some researchers suggest that younger adults (i.e., Generation Y) are more self-oriented and less mindful of their communities than generations past (McLennan & Birch 2009).

However, Francis and Jones (2012) refute this claim in their study where they found that both younger and older adults are both highly concerned with community service. These results come with the caveat that younger volunteers require management modifications, empowerment, opportunities, and greater flexibility in order to increase satisfaction and ultimately retention.

The fire service is a constantly evolving occupation that requires continual training and improvement. As a result, firefighters receive considerable non-monetary benefits such as constantly learning, practicing and applying new skills and abilities. Volunteer firefighters can also learn to control their fears and make decisions in time compressed and often-dangerous situations. The ability to function in these types of circumstances may aid firefighters in other parts of their lives, even if they never enter the career fire service. It is important to note that this



is not necessarily risk-seeking behavior, but actions with a rational purpose. The fire service also reinforces the theory of convergence of self-interest and altruism. While firefighters are acquiring new skills and abilities, they have an opportunity to serve others selflessly. Consequently, the fire service provides an environment that can serve both altruistic and self-actualization motives.

#### Career Motive - Enhance their Career or their Job Prospects

For my third motive category, volunteers may be participating in order to enhance their own career prospects. The motive constitutes an exchange whereby the organization provides training that would open a pathway to a career for the individual or otherwise improve their employment prospects (Scott, Buckman, Bettenhausen, Curl, Gassaway, and Leahy 2004). The career opportunity may occur within the department for which the individual volunteers or elsewhere. Additionally, volunteers may develop a network of personal or professional contacts that could lead to employment (Pruneau & Petreanu 2010). Furthermore, Sinha (2014) submits that an individual can gain recognition from their peers in addition to developing their personal and professional network by volunteering. For example, a volunteer firefighter who needs a hard-working employee at their full-time place of employment in another field may find that hard-working employee in another volunteer at the same department.

Organizations will often choose to add paid or career firefighters in an effort to add services or supplement volunteer responses (e.g., when call volumes increase). Because paid firefighters may be insufficient to meet the community's demands for services a hybrid of paid/volunteer personnel can be relied upon. This opens the possibility that volunteers may eventually become paid career firefighters and therefore volunteer ranks may act as a type of farm club for the professional team. This type of organizational structure can create discord. In fact, many areas of the United States refer to career firefighters as professionals whereas volunteers are simply volunteers. If professionalism and volunteering are divergent, then volunteer firefighters can quickly become amateur, low-status labor. In fact, economists would argue that volunteering is a

cost ineffective folly. To use this thought process in another field, volunteers in Habitat for Humanity should hire professionals to build a house for the homeless (Knox 1999). Unlike the elite career groups, volunteers in the fire service may receive limited training by comparison, possess no knowledge in the discipline and possess limited power despite their tasks having significant consequences (Ganesh & McAllum 2012). If society categorically asserts that volunteers cannot be professional, perhaps the construct of professionalism deserves a wider interpretation. A narrow focus on specialization of paid professionals does not consider the social value of volunteering throughout society (Polonsky and Grau 2008). This also stands to greatly affect an individual's identity with the organization. In a hybrid or combination department with both volunteers and career personnel, a separation in standards, treatment, or public perception can easily keep the concepts of volunteerism and professionalism in conflict.

These types of hybrid departments also potentially create additional conflicts within the ranks. Thompson and Bono (1993) found that many volunteer firefighters see paid personnel as possessing different motives and this could lead to alienation of the paid personnel. However, the authors also note that these same volunteers favored the use of paid personnel if it was necessary to provide for adequate fire protection. Nonetheless, hiring full-time positions from existing volunteer firefighters is a common practice and one that establishes a career motive for at least some of these volunteers.

Some departments will offer its volunteer members money in the form of mileage reimbursements, retirement contributions or a monthly, quarterly, or annual stipend. Volunteers with a lower socioeconomic status are more likely to find satisfaction from even small stipends (Ayyr 2011). Despite other researchers suggesting that financial compensation is a poor motivator of volunteers, Tang, Morrow-Howell, and Choi (2010) found in their study that volunteers were 93 percent less likely to withdraw from the program if they received a financial stipend.

### Social Motive - Solidarity

Another motive, that runs closer to altruistic and self-actualization goals can be found in individual's pursuit of group membership and solidarity, which can represent a type of double-edged sword. Individuals may either have a desire to bond with other volunteers or conversely may experience social pressure to volunteer because they are already a member of a particular clique. Frequently, volunteers report that friends and family recruited them into their roles (Independent Sector 2001). Although this may be effective for recruitment and retention, performance may not benefit from the influence of family and friends. Bellemare, Lepage, and Shearer (2010) found that peer pressure is limited in its effectiveness and under certain conditions can lead to decreases in productivity.

Altruism, combined with the positive aspects social interaction can represent powerful reasons to volunteer. Prouteau and Wolff (2008) hypothesize that many people participate in order to make friends and expand social networks. The desire to build networks can be very strong in the rural and suburban areas where the volunteer fire service is concentrated.

Much like the local diner, the fire station of a sparsely populated area is a primary source of community identity and solidarity (Perkins & Metz 1988). The fire station can allow for regularized group contact at training and fundraising efforts, rituals such as parades and dinners, and can allow community members to escape the mundane into lore and tradition through retelling heroic events (Kantor 1972; Perkins 1987).

Brown (1999) agrees with this perspective and suggests the social atmosphere within a volunteer organization is a crucial component to its success. As a result, functioning volunteer fire organizations tend to attract those possessing mixtures of social skills and technical expertise (Simpson 1996). In this instance, the social benefits of participation tend to map to therapeutic motivations that combat isolation, reduce depression, and lessen loneliness and emotional deprivation (Mostyn 1983; Wardell, Lishman, & Whalley 2000).

According to the alienation model, these intrinsic benefits reinforce the self-actualization motive. Pearce (1983) notes that volunteers are more likely to identify social interaction motives than are career/paid employees. The material rewards associated with professional service ironically are more likely to reinforce social alienation and diminish motivation (Thompson and Bono 1993). A volunteer firefighter frequently will be motivated by solidarity rewards, such as primary group interaction, *esprit de corps*, camaraderie, and departmental pride, which generally improves productivity of the organization as a whole (Linardi and McConnell 2011). While social unity does increase productivity it can also represent a future threat, since individuals are more likely to leave in groups too (Linardi and McConnell 2011).

Whereas these mass defections are part of the game for any volunteer organization, the ties-that-bind can effectively be used to reel in new participants. A legacy of service represents a powerful factor within the decision to join a volunteer department. Bekkers (2007) uses social learning theory to show that parental volunteerism will resonate with their children and resembles an action or deed driven pedagogical process. This fact is readily apparent when reviewing the roster of any volunteer fire department where multiple generations of a family can be found serving.

Others (i.e., Blau & Duncan 1967; Ganzeboom, Treiman & Ultee 1991; Smith & Baldwin 1974; Glass, Bengtson, & Dunham 1986) suggest that the observed legacy relationships are due less to the passing of values and more to shared socioeconomic status. In either event, given the current climate of decline, potential volunteers cannot be limited only to families and close associates of current volunteers. Greater emphasis needs to be placed on expanding recruitment across the community and targeting non-traditional candidates, such as women and racial minorities (Thompson 1993). Tradition is a salient core principle of the volunteer fire service, but leaders must now emphasize and target new members outside the long established network. However, tradition in the fire service dies hard. Opening the fire service to minorities is often met with resistance, particularly when females are concerned. In their study, Yoder and Aniakudo (1997)

found that 92 percent of their female respondents reported being treated differently than other firefighters and no respondents reported the difference as positive.

Nevertheless, the effects of social connections are truly complex within this context given that the costs of volunteer service are borne not only by the firefighter. Kulik (2007) has found a direct relationship between family support and volunteering. Family support enables the individual to achieve higher levels of self-esteem and acts to legitimize the amount of time devoted to the organization by the volunteer (Kulik 2007).

At the same time, it clearly places pressure on the families of volunteers. Work stress is frequently found among all emergency responders' families (Cowlshaw, Evans, and McLennan 2008). It is understood that volunteer firefighters are not exempt from work stress just because they are not receiving remuneration.

Extensive demands are placed upon volunteer firefighters and their families and these demands all represent the costs of time commitment that occurs with routine training requirements and the availability to respond to emergencies. A study conducted by Thompson and Bono (1993) found that on average volunteer firefighters donated 236 hours annually (including between 50 and 250 hours of training). In total, this is the equivalent of six 40-hour workweeks annually. In the absence of family members within the same organization, a volunteer firefighter will experience time away from their families during the time they spend volunteering.

Considering all of this, it is not surprising that McLennan, Birch, Cowlshaw, and Hayes (2008) found that more than half of their respondents indicated that work and family commitments caused them to quit volunteering. Burnout and lost volunteer ranks typically accompany these types of stressors on volunteers and their families (Chou-Wai-yan & So-Kum-Tang 2003).

With all of this in mind, I anticipate finding evidence of solidarity motives within my study, but am cognizant that they may often be incongruent with each other. This category can range from the desire to reduce isolation and build social connections, to coercive peer pressures to join and

serve, and the battle for time commitment to ones' own family at home versus their family at the station.

### Protective Motive - Guilt Relief

A more unique motive for volunteer service can be found within human's protective instincts, their sympathetic tendencies and the guilt that comes with being more fortunate than others. This motive can be seen as paralleling aspects of civic responsibility, which often is more pronounced in local business and political leaders. These elites may participate because they feel that their financial success or policy-making position is a product of the community that in turn establishes a responsibility on their part. In other cases, it may be found in all of the strata of the community, where physical capabilities make it possible to serve when others cannot. This is a perspective that emphasizes a benevolent desire to safeguard the interests of the community. On the other hand, choosing to volunteer can be viewed as a war of attrition with one individual waiting until someone else volunteers (Morath 2013). Both consider their motives, costs and benefits. Those that decide that they must volunteer because no one else can or will likely feel a responsibility to serve.

Because this motive is tied to the guilt of realized blessings, this motive is thought to be a strong one for most charitable organizations and endowments. Higher socioeconomic status does generate the resources necessary to facilitate volunteerism (Wilson & Musick 1998; Wilson 2000), but it is slightly more complex in terms of the fire service. In this case, the socio-economic status of participants leans toward the working and middle class. Although civic leaders can and do volunteer, it is more often the case that the roster is stocked with more representative members of the community. Maret (1983) suggests that recruitment of volunteers is difficult and attrition is a serious matter. She also suggests that individuals can be attached to the volunteer labor force just as people can be attached to the conventional work force. Using the human capital model, people with high resources, which are measured by education, income, occupation, and race, have a higher level of organizational skills, knowledge, and discretionary

time. They therefore vie better in the volunteer labor force (Wilson & Musick 1999; Freeman 1997). Statistics from the United States Bureau of Labor Statistics (2014) on volunteering concur with this study. According to their statistics, 39.8 percent of college graduates volunteered in 2013 as opposed to only 9.0 percent of those with less than a high school diploma. This suggests that those with high numbers of resources such as education, money, and free time are more likely to volunteer, possibly to compensate for guilt because of having higher than average resources. Where the parallel attachment comparison between the conventional and volunteer work forces occurs is when these resources are reduced. Full-time workers are likely to shift to part-time work when other demands are placed upon their time (i.e., a second job, family responsibilities). Likewise, volunteers are likely to cut back on their effort or hours spent volunteering when their conventional/paying jobs consume more time. Although this research is only concerned with the individual-level influences, other macro-level influences may exist. In countries with low levels of unemployment and inflation, employment and income would be more prevalent among its citizenry. With income being one of the necessary resources to enable an individual to volunteer, it is possible for a government, through its macroeconomic policies, to contribute to a higher probability of volunteering (Hackl, Halla, Pruckner 2012). In a country with fiscally responsible economic policies, individuals have more opportunities to obtain the various resources discussed.

Consequently, the level of resources an individual possesses could be very important. Below a certain level, resources may not be sufficient to enable an individual to volunteer. Above a certain level, an individual may experience guilt because of the high level of resources they possess causing them to seek relief through volunteering.

Therefore, it is possible that this type of guilt relief will be present in the volunteer service and that it may even be important as it represents critical support among local elites. Given that elite structure, however, it is more likely that this type of motive will be relatively minute within my eventual sample. That is it may be important but at the same time relatively rare.

### Enhancement Motive - Self-esteem/improvement/confidence

The final motive category is related to the enhancement of self-esteem, self-improvement, and/or self-confidence. Oyedele and Simpson (2011) found in their study that altruism and enhancement are the strongest motives among volunteers. Individuals strongly identify with the organizations to which they donate their time (Laverie and McDonald 2007) and in some sense, they derive substantial parts of their identity from these activities. For example, the answer to the ultimate existential question – Who am I? – becomes easier because of volunteer service (i.e., I am a firefighter.). Therefore, it is necessary for an organization to nurture and develop a volunteer's self-esteem and confidence. In return for participation, the fire service, much like church, offers participants a sense of belonging to something honorable and highly respected. This also serves to increase self-esteem.

Concepts like self-esteem are difficult to quantify or measure. Handy and Srinivasan (2004) found that among hospital volunteers, volunteers were willing to pay \$179.24 annually to receive the benefits of volunteering such as training, professional connections, the chance to use new skills, etc. When direct and opportunity costs are included, the average sum of costs an individual experiences while volunteering is \$4,763 (Handy & Mook 2011). If the volunteer is rational, then they must receive with benefits of at least that much. The question remains however, how does one measure \$4,763 worth of self-esteem.

Perkins and Metz (1988) conducted research in which they found over two-thirds of respondents indicated that being a firefighter was of equal or greater importance than church membership. Other researchers have found that individuals that belong to clubs and religious organizations are more likely to volunteer (Hart, Atkins & Ford 1998; Wilson 2000). Perhaps individuals consider both institutions sacred. In fact, many researchers posit that volunteering parallels religion due to the concern with altruism/personal enhancement and its apolitical and private nature (Eliasoph 1997; Eliasoph 2013; Lyons, Wijkstrom, Clary 1998; Musick & Wilson 2008; Casanova 1994). Borgonovi (2008) found a greater level of health and happiness among those volunteering when



compared to those who donate money. In religious organizations or in the fire service, individuals donating time are happier than those donating money. Additionally, those who are willing to donate a valuable resource like their own time are more likely to consider the needs of others (Batson 1991).

Lia-Troth (2005) suggests that volunteer organizations must explicitly clarify what the obligations of the organization and the entitlements of the volunteers are in this mutual relationship. This serves as a type of psychological contract between two broad categories, transactional and relational (Rousseau, 1990). The categories must be balanced and represent essential elements for volunteer management. The volunteer must understand the organization's performance expectations as well as what the organization will provide to them in the form of a transactional or explicit exchange. The organization must balance this with the less tangible long-term loyalty to the organization by the volunteer and to the volunteer by the organization (Rousseau & Tijoriwala 1996a; Rousseau & Tijoriwala 1996b). Yanay and Yanay (2008) agree that a problem may exist because of a failure to make clear what is expected by both parties. To appeal to the enhancement motive, the organization must provide an environment capable of nurturing and developing an individual's self-esteem and confidence. The individual must then meet the organization's performance expectations, which in and of itself, provides for increased self-esteem and confidence for individuals. Additionally, those who do not meet organizational performance expectations are often separated from the organization. Not only does separation remove the individual from the nurturing environment, it likely has immediate detrimental effects on the individual's self-esteem and negatively influences any potential future performance. This transactional relationship between the organization and the volunteer is not without problems. When the organization places mandates upon its volunteers, these external controls may limit the volunteer's identity and decrease their interest in continuing to volunteer (Stukas, Snyder, Clary 1999). Individuals may interpret a mandate to volunteer not just as an act but as a requirement of the actual time an individual must spend volunteering. Specifically, requiring

individuals to volunteer, particularly when they are motivated by intrinsic factors, may eliminate their free choice and be counterproductive (Callero, Howard, Piliavin 1987). Mandatory volunteering may help to recruit extrinsically motivated volunteers, but as previously well established, this risks undermining intrinsic interest (Lepper, Greene, Nisbett 1973) even if appreciation of the intrinsic rewards still exists.

### *The Motives of Volunteer Firefighters*

As sociological research has demonstrated, not every leisure activity is the same (Stebbins 2009). Volunteering in a fire protection service clearly is different from volunteering at a local library. The potential threat to one's safety, the requisite amount of training, the undetermined hours of call and physical criteria act to reduce the available pool of candidates.

Many communities may have volunteer firefighters who serve because they are an able-bodied adult, and they believe it is their civic responsibility. Perhaps, a volunteer may serve as a volunteer firefighter and assist their neighbors if an emergency occurs in hopes that the neighbor will reciprocate. Manatschal and Freitag (2014) found that help received in the past might serve as a motive for individuals to engage in altruistic reciprocity. Stebbins (2009) would argue that this is not a true volunteer, as the civic responsibility or hopes of social reciprocity serve as coercion. However, the volunteer firefighter is still free to accept or reject the volunteer opportunity. This is apparent, as there is no mandatory conscription in the volunteer fire service. Despite this, volunteer firefighting may not be completely free of coercion. Social reciprocity and civic responsibility act as coercive influences. These influences likely vary between communities. While some aspects of the volunteer fire service, such as the dangerous nature of the work and time commitments, may decrease the pool of volunteers (Mendenhall 2009), the risk of financial loss and localized moral expectations may increase the pool. Mendenhall (2009) suggests that coercion would only exist if every able-bodied person were required to volunteer as a firefighter in the community.

This mandate to serve may be subtle. In small communities, serving as a volunteer firefighter is a family affair. These “family firefighters” likely experience strong influence on their decision to join. While there are likely no repercussions if the individual chooses not to volunteer as a firefighter, the choice is very simple for individuals whose entire family serves. In order to spend time with their family, they must serve in the local fire department, because that is where their family spends their time. The members of the community and the individual’s family may also anticipate that the individual help others. If altruism as a value is present in the family or community, the volunteer fire department may be a matter of convenience for the “altruist”. It allows them an accessible and powerful means to help others.

Many potential volunteer firefighters are simply interested in participating in exciting activities. They may see fire trucks and ambulances pass them on the street and develop a desire to participate in that type of work. This is a strong influence among many joining the volunteer fire service.

Some volunteer fire service candidates may simply want to learn more about how to help themselves and others. Consider the individual that witnesses or comes upon a motor vehicle collision in a remote area with a critically injured patient. During the time that they are waiting for the fire department to arrive, they likely experience a feeling of helplessness. After the individual leaves from the aforementioned motor vehicle collision, they may develop a motive to join the volunteer fire service so that they can learn more about pre-hospital medicine. Not only does this enable them to help others in the event they come upon a similar motor vehicle collision in the future, but they may also be able to use that knowledge to help their own family. Garver, Divine, Spralls (2009) found that many volunteers are interested in assisting in healthcare settings and while this enables them to help others, the knowledge they gain likely helps their own families in the event of an emergency at their homes. The “learner” may be interested in learning as much as possible about the various ways the modern day fire service helps others. That knowledge may help them greatly in their own lives.

The fundamental concept and foundation to understanding volunteer firefighters is by examining their motives. Motives lead to actions. Without the proper motive, an individual will likely not choose to engage in volunteering in the fire service. An individual's motives must be strong to overcome the risk to one self. These risk effects can be somewhat countered by financial consequences and localized moral expectations. Above all, one must understand that motives must come first. Each volunteer must have a reason to join the fire service. Understanding these motives is paramount to analyzing volunteer recruitment, retention, and continuation issues.

### **The Expectations of Volunteer Firefighters**

Expectations are the informed reasons that a volunteer remains engaged in service. Where motives bring volunteers to an organization, expectations are what keeps a volunteer in an organization. As previously mentioned, recruitment efforts in any organization are futile if retention is not understood. Expectations are the key to retention and represent the way that volunteer organizations can prevent massive turnovers. In a service that relies heavily on training and experience such as the fire service, high turnover rates are something that must be avoided.

#### *Conceptualizing Expectations*

By the above definition, a motive may drive an individual to some purpose, such as volunteering. Nevertheless, because initial motives are less-than-fully informed and in reality largely naïve, these motives do not tend to survive untouched. Expectations are the product of an individual's underlying naive motive being informed. Expectations are brought to the organization with the individual and remain with the individual during service. Conceptually, motives bring an individual to an organization while expectations are the fully informed product of those motives that keep an individual engaged with that organization.

#### *The Generic Expectations of Volunteers*

While motives are the initial catalyst that brings about the action of volunteering, they are subject to change (Omoto & Snyder 1995). New volunteers likely have widely different attitudes than those who have been volunteering for months or years (Barraza 2011). Motives are the initial

catalyst in volunteering and while those motives lead to expectations, expectations are subject to change once volunteering begins. That particularly is the case within the fire service.

Consequently, this dissertation draws clear distinctions between initial, naïve motives to serve and those revised and fully informed expectations for continued service.

While the motive drives the initial action, expectations are the basis for how successful or positive the action will be. The concept of having expectations met can be conceptualized by examining the discrepancy between the positive and negative experiences a person encounters in action versus what they expected to encounter (Porter & Steers 1973). Specifically, expectations are the product of initial motives and service experience on the job that combine to form the reasonable expectancies that must be met in order for the individual to continue to serve. Where motives are important for action at the recruitment stage, expectations are critical to retention of the volunteer once they have engaged in fire service. Naïve motives yield to informed expectations once the volunteer begins service and gains experience.

Wanous, Poland, Premack, and Davis (1992) found that job satisfaction and organizational commitment have the strongest influence on individuals having their expectations met. The elasticity of motives and the hardness of reality will lead to a learning process by which a volunteer firefighter is able to form reasoned expectations in lieu of uninformed motives for their service. To fully comprehend and help increase retention of volunteers, the generation of knowledge of motives that lead to participation is necessary. It is also critical to understand how those motives adapt into expectations that must continually be met for the individual to continue service.

Willems, Huybrechts, Jegers, Vantilborgh, Bidee, and Pepermans (2012) found in their study of the scouting movement (i.e., Boy Scouts) that there are three factors related to Clary, et al. (1998) that cause volunteers to quit. First, volunteers reported they quit because of few new opportunities, which Willems et al. (2012) related to Clary et al. (1998) understanding motive. Second, volunteers reported a values mismatch with the scouts caused them to quit. According to

Willems et al. (2012) and clearly, this would be related to Clary et al. (1998) values motive. Finally, Willems et al. (2012) suggested that volunteers who reported they stopped volunteering with the scouts because of struggles with other volunteers in the group. This could be related to Clary et al. (1998) solidarity motive (Willems et al. 2012). The motives each individual possessed when they joined may not match the expectations that each individual developed after joining. For instance, a volunteer with the scouts may have joined because they wanted to help mentor youth. This altruistic motive may have been met as an expectation once the individual began serving. However, the individual may have encountered social friction with other volunteers. Their expectation for this factor was that all of the volunteers would cooperate well because they were all dedicated to the same proposition. Instead, they found struggles with other volunteers in the group. Their expectation of cooperative effort among all of the volunteers is not met and the individual disengages from the organization as a result. Still, this unmet expectation is not the primary motive they possessed to begin volunteering. This reinforces that naïve motives to join are much different than the fully informed expectations that develop while serving.

#### *The Expectations of Volunteer Firefighters*

Expectations applied to the fire service are malleable at best. An individual possessing a motive to participate in exciting work will have an expectation to participate in exhilarating activities. Nonetheless, they may not have a complete picture of the implications of this type adventure seeking activity (i.e., the time commitments required for training and the exposure to death and injury). Hours of training and bearing witness to dead may not have been an individual's motive for service, but it is integral anyway. In fact, some authors suggest that volunteer firefighters can experience a higher level of post-traumatic stress than their paid counterparts (Dyegrove, Kristoffersen, Gjestad 1996; Ersalnd, Weisaeth, Sund 1989; Guo, Chen, Lu, Tan, Lee, Wang 2004). Other researchers dispute the claim that post-traumatic stress is lower in paid firefighters when compared to volunteer firefighters, but acknowledge that the fire service as a whole has a

higher level than other non-emergency related activities (Wagener 2011; Wagner & O'Neill 2012). This is perhaps the best example of naïve motives transforming into informed expectations. Those that join because the work is exciting are quickly told that they must not get excited while serving because the emotion often clouds the rational decisions that must be made during emergencies. The excitement junkies may quickly find that their naïve motive to drive a fire truck 100 miles per hour and run into burning buildings without a second thought yields to a different expectation. Instead, they must stop getting excited, drive slowly in order to arrive at the emergency safely and conduct a detailed, non-emotional hazard/risk analysis prior to initiating an interior fire attack. Still, it is possible for volunteer firefighters to serve for a number of years, operate with caution and purposeful thought, and still find the work exciting.

The altruist may also find that their expectations are not met. In some departments, volunteers are required to obtain the same amount of training that a full-time employee must attain before they are allowed to set foot inside a fire station. It often takes full-time employees between ten and twenty-six weeks to complete recruit training. The same amount of training would take a volunteer an exponentially longer time, perhaps several years. If a volunteer joins the fire service to help others but is not permitted to do so for several years, this will likely result in the volunteer quitting.

The family firefighter may find conflict within the organizational structure that is the fire service. Certainly most families have squabbles without being associated with a hierarchical structure such as their local fire department. Officers within the department are often elected annually. If one member of the family loses an officer's position to another person in the family, this could create social strife between the two family subgroups. This strife could result in one or multiple persons disengaging from the organization.

The learner may also be quickly discouraged. Consider the previous example provided of the individual who comes upon a motor vehicle collision and cannot help due to a lack of medical knowledge. This individual joins the local fire department to learn more about pre-hospital

medicine and is committed to becoming a paramedic. In most states, becoming a paramedic first requires that you become an emergency medical technician. The combined training duration approaches two-thousand hours and requires extensive testing based on national standards. Many of these courses are only offered during weekdays, which prevents volunteer firefighters with Monday through Friday, 8:00 to 5:00 jobs from participating. Again, it is easy for an individual to decide that they are going to join and become a Paramedic so that they can help others, help their family, and have a better understanding of medicine in general. While this is a noble and reasonable motive to join the volunteer fire service, the expectation, once informed during service, may not be met due to the time constraints of the volunteer. This unmet expectation, like the others, may result in the volunteer firefighter stopping their service.

### **The Satisfaction of Volunteer Firefighters**

Satisfaction is not related to motives to join. Instead, satisfaction is the result of met expectations. If one chooses a particular restaurant for a meal, it is because they intend to order a specific menu item or type of food. The expectation is that the meal will taste good. Should the meal not taste good, then the expectation is not met and this will lead to the individual being dissatisfied. The dissatisfaction may result in the individual complaining to the restaurant, leaving a smaller tip, or at worst, refusing to visit that restaurant in the future.

### *Conceptualizing Satisfaction*

The example above provides a simplistic definition of satisfaction. One is satisfied when their informed expectations are met. It is important to re-emphasize that satisfaction is not related to motives. Expectations encompass a wider scope that includes the motive to join but also includes many other assumptions. For example, the fire service suffers from an overall lack of diversity. Minorities that enter the volunteer fire service may possess a motive to join so that they can help others. Their expectation is that the work environment will be free from racial or gender discrimination. Should they find this is not the case and they are constantly exposed to racial or gender discrimination or harassment, they will likely quit as the work is not satisfying. They may



be able to help others which was their initial motive to join, but their assumed expectation of not working in a hostile work environment is not met and they are therefore dissatisfied. Using the restaurant example above, consider that the food at the restaurant was excellent but the restaurant was filled with cigarette smoke due to a recent policy change and the waitress was very rude. Remember that the individual's original motive to eat at that restaurant was the food. Although that expectation was met, the expectations of a clean environment and friendly staff was not met. These were not initial motives when selecting this restaurant; however, the lack of satisfaction as a result of these expectations being unmet will have similar consequences to being served a meal that tasted bad. Expectations are informed because they consider every aspect of service, not just the initial naïve motive to join. Satisfaction is a result of all of the expectations being met. Dissatisfied volunteers, just like dissatisfied restaurant patrons, are likely not to continue with the organization.

#### *The Generic Satisfaction of Volunteers*

This research grounds the measurement of satisfaction in economic utility theory, expected utility theory or the rational economic model. The field of economics uses expected utility theory to explain rational choices. When consuming a good or service, utility is the satisfaction that the consumer expects to receive (Govekar & Govekar 2002). An individual will measure the utility, or usefulness, in every decision they make. A rational person will make the choice that maximizes the expected utility of their decision (Rabin 1998). The decision to maximize utility can also be thought of as the decision that yields the "greatest happiness." This "greatest happiness" principle comes from the concept of utilitarianism, which was first coined by Jeremy Bentham in the late 18<sup>th</sup> century (Martin 1997). Despite the fact that the expected utility model is grounded in financial and remunerative criteria, each individual will have a range of criteria, monetary and nonmonetary, that comprises their own unique utility function. For example, everyone wants to earn money but no one works continuously, as free time also has utility.

Expected/Economic utility theory assumes, however, that all persons are rational or make rational decisions. This may be easier to recognize in economics than in social sciences. If a person is offered a choice to either receive ten dollars or pay ten dollars, the rational choice should be clear. Most individuals will foresee a greater utility in receiving than losing. Nevertheless, Simon (1986) suggests that theories of substantive rationality and the assumptions of utility maximization do not provide a sufficient base for predicting or explaining economic behavior. Volunteers give their time and labor to organizations but in lieu of financial incentives, they receive satisfaction or some other type of reward (Cnaan & Goldberg-Glen 1991). Some consider work that is remunerated not volunteer (Smith 1982). Volunteering is simply an activity that provides goods and services below market rate. Therefore, financial factors do not have to be a primary consideration within the expected/economic utility model (Wilson 2000). Economists have paid little attention to the importance of volunteerism (Stinson 1978). In social sciences, when compared to economics, rationality may not be as clear, particularly in service organizations. A service organization, such as the volunteer fire service, may promise to offer excitement, altruistic opportunities, and the ability to enhance one's knowledge and skills. Many would anticipate these as positive experiences and over time, these become the norm. Individuals will more closely examine any exceptions to this norm. According to Schil and Schiff (1993) people pay less attention to the expected than to when an exception occurs. Therefore, an individual may receive their expected utility if they experience excitement, altruistic opportunities, and the opportunity to enhance one's job knowledge. Still, economics would suggest that receiving two of the three expectations could still lead to sufficient utility and satisfaction. If an individual, receiving two of the three expectations, chooses not to participate in the volunteer fire service, this may appear irrational. Perhaps the weight of their utility lies with the one expectation that remained unfulfilled.

Clark and Wilson (1961) suggest that tangible benefits or the incentives of material gain are useful for understanding voluntary action. However, this does not explain volunteers who receive

no tangible benefits or incentives of material gain. Rose-Ackerman (1996) suggests that there may not be an exclusive link between utility and transactional economics. Instead of consumption patterns and happiness, some may find utility in the achievement of a general goal. Furthermore, altruists may feel some moral obligation to help in the provision of charitable goods or services. Expected utility model also does not treat certain types of behavior, such as generalized decreasing absolute risk aversion (Quggin 1995; Machina 1982).

Some may believe that the archetype among those who choose to volunteer in the fire service is anything but rational. Volunteering in the fire service and at the local soup kitchen both entail time and effort. However, the fire service presents its volunteers with the real potential for injury or death (Simpson 1996). The routine risk of bodily harm is present in very few other volunteer opportunities. The risks involved should be a deterrent for those with even lower levels of risk aversion and as Brudney and Duncombe (1992) note, volunteer firefighters lack substantial financial rewards.

The economic utility model cannot fully explain an individual that chooses to work for no monetary reward and potentially lose their life. Many may not consider this choice rational. Research into the attachment theory suggests that imminent threats to an individual disrupt other activities, including behavior intended to improve others' welfare. When faced with stress, individuals seek others for support rather than helping others. Personal security must be present before people dedicate time and energy to others' needs (Bowlby 1969; Bowlby 1982; Mikulincer & Shaver 2003; Mikulincer & Shaver 2007; Shaver & Hazan 1988). The volunteer fire service diverges from the economic utility model when considering these individual social and psychological factors (Clary, Snyder, Stukas 1996).

Despite its limitations, economic utility theory can aid in this research by conceptualizing the factors found within a typical utility function. This research will then employ public opinion research to assess general levels of satisfaction with those factors found within an individual's utility function. Public opinion research will help to discover current unanimity of view or

consensus (Singer 1970; Alpert 1956). Public opinion research may also aid in identifying the significance of facts uncovered during the investigation (Noelle-Nuemann 1980).

A volunteer may also engage in a volunteer organization based on a naïve motive. Once they begin volunteering, informed expectations will emerge. Whether those expectations are met, and the utility they find in the volunteer opportunity, will lead to satisfaction. Satisfaction represents the utility necessary to have an individual remain engaged within the volunteer fire service. It is not enough that the organization ask the individual to volunteer or to show up for their first experience. In order to keep the volunteer coming back, the service itself must be meaningful (Light 2002). One can understand satisfaction by following the tradition of research that takes place in the context of economic utility and volunteerism. The goal of this research is to identify motives of initial volunteers and the expectations that emerge once a volunteer joins the fire service. Both motives and expectations are potential factors in the utility functions of each volunteer firefighter. By gathering a range of these factors and utilizing public opinion strategies, this research will construct a measure of volunteer firefighter satisfaction.

#### *The Satisfaction of Volunteer Firefighters*

When considering satisfaction of volunteer firefighters, one must consider the expectation to serve that may be present. Using the aforementioned examples, those that have an expectation to help others is the first to emerge. If, as stated in the aforementioned example, the volunteer is required to undergo years of training before their altruistic expectations are met, they may eventually question what good the massive amount of training they are obtaining is doing if they are not yet permitted to help others. With their expectation unmet, they are likely to disengage from the organization long before they complete their years of training. To use a generalized example, imagine if before someone could volunteer at the soup kitchen, they had to obtain two years of training consisting of two four-hour nights per week and every other Saturday for eight hours. It is likely, that the soup kitchen would have no volunteers. The altruist only derives satisfaction from serving as a volunteer when they feel as if they are helping others. This is likely

one of the easiest expectations to fulfill. A young volunteer firefighter is likely physically capable of performing the physically demanding firefighting tasks. As the volunteer ages, they may decide that they can no longer perform those physically demanding tasks but still participate as they feel a responsibility of driving apparatus to and operating apparatus at emergencies. They likely see driving and operating apparatus as a valuable means to continue to help others. If they become incapable of performing those tasks, they could continue to participate by handling various administrative tasks (i.e., paying bills, balancing checkbooks, ordering equipment). By extension, this could be viewed by the volunteer as another way to help others. Given that there are a multiple ways for a volunteer to “help others”, altruism likely provides the easiest access to satisfaction.

The achievement of satisfaction through multiple activities explains why combination (volunteer/paid) departments experience a decline of volunteers once the organization introduces paid personnel. The volunteer may feel as if they can no longer participate in physically demanding firefighting activities. The paid personnel introduced into the organization are usually responsible for driving and operating apparatus, which is something that the volunteer can no longer do to help others. Organizationally, in order to insure fiduciary responsibility and efficient logistical support, administrative personnel may be implemented that allow for central purchasing and financial accountability. This is highly appropriate in a world that demands accountability of public monies. It is also senseless for a fire station to order six sets of size ten boots when the neighboring fire station five miles away has six sets of size ten boots sitting on a shelf.

Nevertheless, the centralization of these administrative tasks is yet another activity that the volunteer no longer can do. This places the volunteer in a position where there are no remaining activities in the institution that they are physically capable of doing or are not completed by paid staff. The volunteer likely feels that they are no longer doing anything to help the organization and by extension, to help others. Being no longer satisfied through their altruistic expectation, the volunteer is likely to stop participating.

Consider the firefighter who volunteers because his family does also. Not only could the individual become dissatisfied with other family members causing them to quit, but the entire family could become dissatisfied with the organization's leaders, causing a mass exodus of all the family members. Due to the interdependent social influences, satisfaction of this expectation may be attained only when the entire family is satisfied while serving.

Volunteer firefighters that have an expectation to experience excitement may also be dissatisfied. Just as an individual may migrate to progressively more dangerous recreational activities because what was once exciting is now stale, volunteer firefighters may find that their initial excitement while serving fades with service time. False alarms and medical incidents that involve non-emergent conditions can create a jaded volunteer firefighter and accelerate the time at which it takes for the exciting work to become mundane.

Those that are interested in obtaining more knowledge are likely the least to be dissatisfied.

Given the scope of practice in the modern fire service, there is a wide range of training topics that revolve around the myriad of services offered from technical rescue and fire suppression to pre-hospital medicine and hazardous materials/weapons of mass destruction mitigation. Even the routine tasks, such as structural fire suppression, are practiced and refined based upon new research. In the case of the learner, dissatisfaction is likely the result of a lack of access or time to devote to the training instead of a lack of new information.

### **Synthesis: Motives → Expectations → Satisfaction**

Volunteer firefighters in the United States are in a state of decline. The implication of this decline is a higher risk to both citizens who rely on them for service and the remaining volunteer firefighters that rely on them for support during emergencies.

In seeking to understand the volunteer firefighter, one must understand the aforementioned motives and expectations. The literature has identified motives, which are the underlying reasons for why an individual chooses to volunteer as a firefighter. These motives are generally naïve and can change. Mature informed expectations emerge once the individual gains experience

serving as a volunteer firefighter. Finally, an individual must achieve a level of satisfaction based upon their informed expectations to remain engaged in the volunteer fire service. This research will leverage these concepts to build a measurement strategy for satisfaction within the volunteer fire service. All three aspects, motives, expectations, and satisfaction must be examined in order to better understand this dilemma.

The theoretical relationships that exist between motives, expectations and satisfaction that I seek to find for volunteers engaged in the fire service are to some extent consistent with those found in any employment contract. Consider, for instance, an individual who pursues a career path and who is primarily motivated by the financial rewards it offers. This person will engage in the occupation with an expectation of receiving the agreed upon fee for service, and it could be argued that as long as the fee is paid, the expectation is fully met.

However, the individual's conceptualization of the job is less than fully informed at the time the bargain is struck. It is only after the employee engages in service, understands the employer's definition of assigned tasks and duties and appreciates the context of the work place that the mature expectations of the contract can be clearly delineated. Thus, it may be that the job is reasonably consistent with these early naïve expectations and the contract is a sound one.

Otherwise, it may be that the originating motives and early naïve expectations are so inconsistent with reality that the bargain must be renegotiated or simply terminated with the two parties moving on from it. For example, the enhancement motive is not necessarily contradictory to values motives. Instead, they may be complementary. Omoto and Snyder (1995) state that volunteers interested in self-enhancement can provide great benefit to an organization. While an altruistically motivated volunteer is likely to remain longer (Briggs, Peterson, & Gregory 2010), this may serve as an example of the transition from motives to expectations. Specifically, an individual may choose to volunteer by way of enhancement motives and stay because of altruism, a values-based expectation. In the absence of these altruistic opportunities after joining, the

volunteer may attempt to find satisfaction through another motive or simply disengage from the organization.

Of course, the primary difference between this scenario and the one I am interested in is that the fire service does not retain significant leverage over the financial resources of the volunteer. This makes the disparities that may exist between the volunteer and the service particularly important; it is inefficient for the service to continue training volunteers motivated by one theme and then not be able to meet it. As such, it is imperative that we better understand this process of acting on motives to serve, realizing the reasonable expectations of service and deriving satisfaction from it.

The other concern in this context is that volunteers' motives and expectations are neither uniform nor fixed. The motive that pushes one individual to volunteer may not attract another. The motive that encourages one individual to begin volunteering may not become the realized expectation that keeps them serving in the public interest.

Clary, et al.'s (1998) six-part categories of volunteer's motives gives us a starting point from which to begin. Nonetheless, I anticipate some substantial deviation given that the job of volunteer firefighter brings significant risk of injury and the potential for loss of life. It also is a field where the intrinsic solidarity and enhancement motives may be pronounced amongst a core group of members that form especially tight familial bonds. These ties-that-bind may in fact make current efforts to use extrinsic financial rewards, like retirement contributions, stipends, and call out payments, ineffective or even adverse to the long term interests of the fire service organization. Along these lines, then, I propose a mixed methods research design that incorporates the best elements of qualitative and quantitative approaches to better understand the problem of attracting and maintaining an effective volunteer fire service.



### *Formal Hypotheses*

Based on the framework developed by Clary, et al. (1998), the following hypotheses will be tested to determine important and satisfying factors among volunteer firefighters as motives to join and expectations to serve. Values, Understanding, Career, Social, Protective, Enhancement

H<sub>a1</sub> – Values factors are significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a2</sub> – Understanding factors are significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a3</sub> – Career factors are significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a4</sub> – Social factors are significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a5</sub> – Protective factors are significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a6</sub> – Enhancement factors are significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

### *Alternative Explanations*

It is possible that the research will demonstrate that none of the motives analyzed are important within the retention calculus among individuals currently serving in the volunteer fire service. It is possible that other factors such as department type/institutional structure (wholly volunteer or combination [volunteer and paid]), years of service, family obligations (single, married, married with children), legacy / familial tradition of volunteering, race, gender, close calls, radio/gear/equipment provided and other civic memberships have a greater influence on retention than the factors being studied. As a result, additional hypotheses will be tested as follows:

H<sub>a7</sub> – Department type/institutional structure is significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a8</sub> – Years of service are significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a9</sub> – Family obligations (single, married, married with children) are significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a10</sub> – Legacy / familial tradition of volunteering is significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a11</sub> – Race is significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a12</sub> – Gender is significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a13</sub> – Experiencing or witnessing close calls is significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a14</sub> – Radio/gear/equipment provided by the department is significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

H<sub>a15</sub> – Other civic membership is significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

## CHAPTER III

### RESEARCH DESIGN

Despite the inherent importance of volunteer firefighter service to citizens in communities across the country, the systematic study of volunteer firefighters represents an arduous task. Past studies have typically examined fire departments with successful recruitment and retention programs and have generally yielded one of two outcomes. First, the results are often very broad in nature. For instance, a study may suggest that in order to more effectively recruit and retain volunteer firefighters, the department should improve their recruitment and retention programs, without specific suggestions on how this should occur or what particular aspects of recruitment need attention. The other result typically takes a “shotgun” approach. In this case, the study will suggest offering volunteers a wide range of intrinsic and extrinsic rewards in an effort to supplement volunteer firefighters’ satisfaction. Unfortunately, this approach may overwhelm the volunteer with a myriad of costly rewards they may be likely to dismiss as unimportant. This study is neither too broad nor too overwhelming. In lieu of examining fire departments with successful recruitment or retention programs, this study adopts the individual volunteer firefighter as its unit of analysis and evaluates the following research questions as first outlined in Chapter 1:

- 1) What *motives* exist for those to join the volunteer firefighting service?
- 2) How do these *motives* alter and map to *expectations* for continued service?
- 3) How well are volunteer departments meeting these different *expectations*?

The theoretical framework used to answer these research questions is based upon the work of Clary, et al. (1998). Their work identifies six factors associated with volunteerism, namely:

*values, understanding, social, career, protective, and enhancement* influences. While Clary, et al. (1998) generically refer to these factors as “motives,” my study conceptualizes these as factors in a couple of different ways. First, this study uses the factors as a baseline to identify individuals’ motives to join the volunteer fire service. Next, my research invoked these same six factors to understand volunteer firefighters’ expectations to continue serving. Finally, this study identifies how well departments are meeting these expectations by developing measures of satisfaction and modeling the retention calculus. Together this trio of analyses is essential to understanding and ultimately reversing the decline in the numbers of volunteer firefighters.

### **Taking a Mixed Methods Approach**

This research used a mixed methods approach (i.e., qualitative and quantitative forms of analysis) to answer the above research questions. Naturalists and interpretive constructionists argue that one cannot directly measure reality. Instead, reality is perceived and interpreted differently by each person and is always subjective (Rubin and Rubin 2012). This argument tends to favor the use of qualitative research as it provides a deeper, richer, more holistic understanding of the multiple perceptions of reality. Nevertheless, the use of qualitative analysis alone would not permit a close examination of the objective and measurable systemic relationships found within the volunteer decision calculus. Moreover, the small samples often targeted by qualitative analysis may not be representative or generalizable to the broader population.

Unlike naturalists and interpretive constructionists, positivists claim that there is only one reality and that it is both objective and measurable. Positivists prefer the use of quantitative methods to find the single universal truth that, as long as it meets specified conditions, is always true (Rubin and Rubin 2012). Despite its emphasis on a single truth, the sole use of quantitative analysis would not permit the deeper more nuanced examination of the multiple perceptions of reality that are present in this study.

With this in mind, my study used both qualitative and quantitative analyses. Johnson and Onweugbuzi (2004) state that mixed methods have emerged to solve the struggle between

qualitative and quantitative methodologies and has created a third major research paradigm. The application of mixed methods in this research utilizes the benefits of qualitative and quantitative methodologies while examining the multiple reality perceptions as well as the single measurable truths. (Wilson 2013; Johnson, Onwuegbuzie, and Turner 2007).

### *Qualitative Methods*

The preceding chapter sketches out the qualitative origins of this research. Although the extant literature provides a basis for this research, much of it relates to generic volunteer service and is not specific to the volunteer fire service. The literature review illustrated that volunteerism in the fire service is much different from many other volunteer opportunities. It is possible that some of the hypothesized motives among generic volunteers are not present among volunteer firefighters. It is also possible that other unique motives exist for these actors that are not present within the generalist literatures. The use of quantitative analysis alone is not conducive to identifying and analyzing these additional influences or eliminating irrelevant ones. With this in mind, the literature review and particularly the six Clary, et al. (1998) factors of volunteering, served as a starting point from which this research was initiated.

The qualitative methods utilized here consisted of interviews and concept mapping exercises, which identified those factors among volunteer firefighters that I could translate into the Clary, et al. (1998) factors.

I invoked a snowball sampling technique to draw a sample of qualitative inferences about volunteers' motives to join and their expectations to continue serving. Snowball sampling is a form of purposive sampling utilized when random sampling techniques are either improbable or too costly (Handcock and Gile 2011). The volunteer fire service is a difficult to reach population, which makes snowball sampling a viable approach. My role as both a practitioner and researcher, as well as the snowball sampling approach, allowed me to assess the primary motives and expectations at play with regard to volunteer firefighter recruitment and retention. The use of snowball sampling resulted in one respondent referring me to another respondent that had the

potential to reveal different / unique / conflicting factors for participating within the volunteer fire service. For the qualitative analysis, snowball sampling provided the most feasible, efficient and cost effective method of learning what forms that the factors identified by Clary, et al. (1998) take amongst volunteer firefighters. Snowball sampling is an excellent approach to obtain this holistic, broad view of the individual responses that volunteer firefighters consider important as motives to join and expectations to continue serving.

This study used a series of semi-structured interviews to first identify these factors. In order to understand when these factors arise and gain importance within the context of the volunteer fire service, I then asked the respondent to participate in a concept mapping exercise. Concept maps assessed which factors were associated with joining and maintaining service, and assessed the relative levels of importance at each stage. In addition, I recorded contemporaneous expressions of satisfaction with these factors. Then, I built aggregate maps of the decision calculi.

This process yielded three specific results or outcomes. First, I translated the factors related to volunteerism revealed during the review of extant literature to the context of volunteer fire service. This was important as it allowed me to identify the qualitative counterparts to the Clary, et al. (1998) factors outlined in the literature review. Second, the classification and aggregation allowed me to perform the qualitative analysis. Specifically, I was able to make comparisons of both the individual and aggregate concept maps to explicate the differences between motives to join, expectations to continue serving, and satisfaction in service. This analysis occurred at the level of the individual responses and the level of how the individual responses matched the Clary, et al. (1998) factors. These results began to illustrate the various factors involved with motives, expectations, and satisfaction specific to volunteer firefighters. Because the literature review was largely generic among all volunteer organizations, this second outcome led me to understand volunteering in the fire service versus other volunteer opportunities. Finally, it served to inform the quantitative portion of this research. The qualitative results served as the foundation from which to build the survey instrument used in the quantitative analysis. Without these qualitative

methods, the survey instrument may not have addressed the appropriate factors for volunteer firefighters. The survey instrument was able to utilize the most common individual responses as closed-ended questions that evaluated importance and satisfaction. Without the snowball component in this research, I would have been forced to use more questions that are open-ended in the survey instrument in order to assess the common individual responses that were identified in the qualitative approach.

Of course, non-probability approaches, such as snowball sampling, create threats to validity. Snowball referrals still start with a seed (the first to be interviewed) and this seed, if not representative of the overall population, could require a larger snowball sample before reaching the saturation point. While my approach involved asking snowball respondents for referrals to individuals that have unique, conflicting or different motives or expectations, the chain referrals represent a threat to internal validity. As a result, I did not attempt to draw inferences from the information derived from the snowball sample. Although the qualitative data began to paint an overall picture of the volunteer firefighters' social environment, the conclusions of this research are based solely on the quantitative results.

### *Quantitative Methods*

Without the qualitative methods present in this research, the quantitative analysis could have little or no direction. The concept mapping exercises and resultant qualitative analysis served to assist with the development of a rigorous quantitative modeling approach that invokes a survey instrument and a larger, random sample. The quantitative methods identified naïve motives operating at the time of the respondent's decision to join the volunteer fire service. Then, it captured how these motives morph and become informed expectations through a volunteer's exposure to training and service within the organization. Based on these naïve motives and informed expectations, I then assessed the levels of satisfaction with respondents' volunteer service. Finally, the expressed levels of importance and satisfaction with these different factors predicted variance in the respondents' retention calculus. From these data, I will present a model

of the respondents' expected length of service based on motives, expectations, and a host of alternative explanations for continued service.

### **Population of Study – South Carolina Volunteer Fire Service**

This topic of the volunteer fire service obviously is one that applies throughout the United States. However, the task of studying such a large population represents a significant obstacle to undertake the qualitative and quantitative approaches I need to answer my research questions. For the qualitative study, the snowball sampling necessary to encompass the heterogeneity of possible motives that may exist at the national level are daunting. More importantly, access to participants in every area across the country is almost impossible as there is no aggregated roster information and any nationwide estimates of volunteers are thought to be unreliable (Karter and Stein 2013).

Likewise, the resources necessary to conduct large N survey research designs are extremely costly and cost prohibitive for this particular approach. I did not possess the resources necessary to target a national population of volunteer firefighters. Therefore, I narrowed the definition of my population to a more ready scale. In this analysis, my professional background and current capacity made the state of South Carolina the most reasonable definition of the population for my study and results will therefore generalize to the volunteer fire service, as it exists within the state of South Carolina.

Although I did not have the resources necessary to target a national population, South Carolina *is* a representative context in which to pursue this study. According to the United States Fire Administration's Fire Department Census (2013) Database, there are approximately 1,060,000 firefighters within the United States. Of these, 330,638 (31%) are career, and 730,218 (68%) are volunteer or paid per call. The census also reveals that within South Carolina had 19,815 firefighters, with 6,005 (30%) being career and 13,810 (69%) being volunteer or paid per call. This demonstrates that South Carolina fire service maintains a similar institutional structure to that of the nation's overall.



South Carolina, like many other states, has a mix of urban, suburban and rural communities served by the various institutional structures of fire departments. South Carolina does lack a major metropolitan area. However, given that the literature reveals that very few volunteer firefighters exist within dedicated urban areas, this is not critical to the context of this particular study. The lack of major metropolitan area is not a limitation of the study but rather reinforces that South Carolina is a representative example of the volunteer fire service. According to the 2013 United States Census data, South Carolina closely approximates the national statistics in nearly every recorded demographic category (see Table 3.1). South Carolina has a census composition within five percent of the national estimates in gender, age, and each subgroup. While South Carolina is similar to the national estimates in persons representing one race and two or more races, the composition of whites, African Americans and Latinos are somewhat different. South Carolina has approximately 7% lower white, 15% higher African American, and an 11% lower Latino levels. Although I cannot truly generalize the findings of this study to the United States, this study's design will answer the research questions within the population of volunteer firefighters found within South Carolina. This analysis can then serve as a foundation for projects in alternative states with unique characteristics to further assess aspects of validity and reliability of my eventual conclusions. More importantly, it may also lead to the allocation of resources to undertake a larger national study of this critical phenomenon.

The population for this analysis of the volunteer fire service is South Carolina with which I am very familiar. I joined the volunteer service in 1991 and have served in every rank from firefighter to Chief. As an adjunct instructor for the South Carolina Fire Academy, I have also had the opportunity to teach across the state and interact with many different departments. This familiarity greatly enhanced the prospects of the mixed methods approach employed here. It provided the access and inherent knowledge necessary to conduct the qualitative study of motives and expectations. In addition, it provided the necessary contacts to fire departments throughout

the state of South Carolina that participated in the quantitative analysis through completion of the survey instrument.

### **Qualitative Approach to Understanding Firefighters' Motives to Join**

The qualitative portion of this study began with Clary, et al. (1998) six factors of volunteerism. However, these concepts required some modification given that the fire service is much different from other types of volunteer opportunities. Volunteers at the local library, for example, are not likely to dedicate their time with the enhancement motives (e.g., excitement and risk taking) described by Clary, et al. (1998) in mind, nor are they likely to have a higher chance of bodily injury or death than in their everyday lives. Given its risk-filled environment, it became necessary to adapt the six categories of volunteerism from Clary, et al. (1998) to the unique context of the fire service.

#### *Snowball Sampling Technique*

To evaluate how these individual goals might emerge within the unique context of the volunteer fire service, I relied upon a series of personal interviews that centered upon a concept mapping exercise. In choosing participants for these interviews, I adopted a snowball sampling strategy. Snowball sampling is a form of purposive (non-probability) sampling utilized when random (probability) sampling techniques are either cost prohibitive or impossible (Handcock and Gile 2011). In small and isolated populations, such as the volunteer fire service, snowball sampling provides a cost effective method to identify representative samples of respondents. Snowball sampling generates valuable information about the broader characteristics of those individuals found within the population when an initial probability sample is impractical or impossible (Biernacki and Waldorf 1981).

Snowball sampling method is a technique whereby a working sample of respondents is generated from an initial research subject who provides the name of another that provides the name of a third, and so on (Vogt 2011). Like a rolling snowball, the sample size grows with each set of respondent referrals. Cohen and Arieli (2011) suggest that snowball sampling is a very effective

means of generating a sample in complex environments or those where a common attitude of distrust or suspicion exists regarding either the research or the researcher. Through the referral of another member of the population, the respondents' fears are somewhat assuaged.

Under normal circumstances, the snowball sample continues to build until the information gathered converges to a saturation point. This interval is the point in the data gathering at which no new information is forthcoming (Glaser and Strauss 1967). This critical event is when the sequence of respondents' answers becomes highly repetitious and each additional respondent reveals no new data. Rubin and Rubin (2012) state that interviews should continue until interviewees no longer offer refined or somewhat different perspectives.

This saturation point may be difficult to achieve without probing the interviewee with additional questions, outside of the structured interview guide (see Appendix E), when necessary. This insures further pursuit of vague respondent answers to identify if they are new information or previously discovered data. Many scholars suggest that a high level of bias can exist because of the choice of the seed, or the first respondent to be included in the sample (Berg 1988; Eland-Goosensen, Van De Goor, Vollemans, Hendriks, and Garretsen 1997; Erickson 1979; Friedman 1995; Kalton 1983; Kalton and Anderson 1986; Spreen 1992; Welch 1975). Because each referral will be the result of the first respondent, there is a chance of bias within the entire sample. However, asking for referrals to other potential respondents who hold widely different perspectives than the source and not just referrals for other members of the population, can counter this potential for bias (Salaganik and Heckathorn 2004).

My snowball-sampling frame began with the research announcement approved by the Institutional Review Board (IRB) (see Appendix G for IRB approval). I sent this announcement to fire departments throughout South Carolina via the State Firefighters Association email list and additional follow up contacts. The interviews began with several respondents from a mostly volunteer department in Berkeley County, which generated additional respondents within that department. Another respondent participated from a wholly volunteer department in Dorchester

County followed by nine respondents from a wholly volunteer department in Orangeburg County. A single respondent from a large mostly volunteer department in Lexington County then participated followed by a single participant from a small wholly volunteer department in Fairfield County. Several respondents from a mostly volunteer department in Colleton County then participated. Particular emphasis was placed on using interviewee's suggestions for other participants that would hold unique or conflicting perspectives on the fire service. This research also placed emphasis on respondents who had left the volunteer fire service only to return at a later point. These respondents have multiple perspectives of the motive to join the volunteer fire service. Through repetition and snowball sampling techniques the mapping exercises helped cultivate the range of possible motives to join that exist for South Carolina volunteers.

The snowball sampling method ultimately generated twenty-five respondents representing seven wholly or mostly volunteer department in six different South Carolina counties. The median years of service among the qualitative sample was 18.6 years. Among the 25 respondents, three females and one African-American firefighter participated in the qualitative interview portion of the study. The median age among qualitative respondents was 42 years with three respondents below age 30, ten respondents below age 40, eighteen respondents below age 50, and twenty-two respondents below age 60.

In order to address different levels of maturation bias within the respondents, two subgroups within the qualitative sample were established. The first subgroup consisted of volunteer firefighters with two years or less of service. The second subgroup consisted of volunteer firefighters with more than two years of service.<sup>1</sup> This snowball sampling technique generated a sample of respondents that allowed me to reach an identifiable saturation point.

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<sup>1</sup> In South Carolina, it takes approximately two years to obtain the necessary training and experience to become qualified under the state occupational and safety regulations to participate in most firefighting activities.

### *Concept Mapping Exercise for Motives to Join*

During each interaction with a respondent, I completed a structured interview that informed a concept mapping exercise designed to assess motives, expectations, and satisfaction. The origin of concept mapping, often attributed to Kelly (1955), is quite useful as a means to identify values, beliefs, and assumptions, as well as the associated relationships that an individual possesses about a problem or issue. Brown (1992; 1998) expanded on Kelly's (1955) work to illustrate that concept maps should provide additional richness by following a natural conversation. Along those lines, the concept mapping exercise served as an extension of the conversation that occurred during the interviews that preceded the concept maps in this research.

The concept map is a visual representation of how the interviewer is supposed to understand the participant's world within the context of the interview. This rich context allows the participant to compare and contrast their ideas and elaborate on the relationships of each concept that improves the interviewer's understanding (Bryson 1995; Kelly 1963; Schein 1992). While the individual concept maps are useful in illustrating a single respondent's perception of reality, the aggregation of these views provides even greater utility. This aggregate map provides an overarching depiction of the multiple perceptions that exist among respondents, which is the essence of qualitative research. This approach provides researchers a holistic view of both the environment and problems that relate to it (Focht, Langston, DeShong 2001). Eden and Ackermann (1998) concur and state that an aggregate concept map depicts a holistic view of the problem and a composite view of the entire social system. My research used these qualitative methods to identify what individual responses exist as motives to join, expectations to continue serving, and sources of satisfaction. Once identified, the individual responses were coded to the Clary, et al. (1998) factors and then informed construction of the survey instrument, which was used on a much larger, probability sample.

I gave respondents an informed consent form (Appendix C) that explained the purpose of the research project and the respondent's rights under participation. If the respondent agreed to

participate and signed the informed consent form, I began a structured interview process that captured information across a range of possible factors associated with volunteer service. The interviews followed a standardized guide (Appendix E); however, I introduced additional probing questions when appropriate to insure that the exploration of possible motives was adequate. The first eight questions established age, years and type of service, family history, marital and parental statuses, and other civic group memberships. The ninth and tenth questions were open-ended and allowed for the respondent to elaborate on what made he or she begin volunteering as a firefighter as well as what kept he or she volunteering as a firefighter. The subsequent questions addressed the factors outlined by Clary, et al. (1998). This insured that each respondent considered all of the motives to join and expectations to continue serving identified in the literature review. If the respondent answered that a factor was unimportant, it was not included in the concept mapping exercise.

At the conclusion of the interview, the concept mapping exercise began. I separated respondents into two groups. Those with less than two years of service only completed motive to join concept maps while those with more than two years of service completed both motive to join and expectation to serve/satisfaction concept maps. Based upon the interview responses, I recorded the participant's motives to join on index cards (see Figure 3.1).

Respondents used small (2" x 3") index cards to document motives with low importance, medium (3" x 5") index cards for motives with moderate importance and large index cards (5" x 7") to represent highly important motives to join. I did not record unimportant motives in the participant's concept map.

The respondent then arranged the index cards into a motive map (see Figure 3.2), which uses spacing and overlap to represent the relationships between each motive to join the volunteer fire service. Then, I labeled the map as representing time zero ( $t_0$ ) or the time at which the respondent joined the volunteer fire service. Once the motive map was constructed, I asked the respondent to insure that the map included any concepts or factors related to their motives to join the volunteer

fire service. I added any additional motives and made changes until the respondent was certain the concept map accurately represented their motives to join. Next, I labeled the concept map with a respondent identification number.<sup>2</sup> Finally, I photographed the motive map for documentation.

If the participant had more than two years of experience within the fire service, I asked them to construct a current expectation/satisfaction concept map that I will discuss in detail below. If the participant had less than two years of service, I photographed and documented his or her unique motive concept map and this concluded his or her participation within this research.

### *Qualitative Motives Analysis*

My analysis of the qualitative motive results will consist of several tasks. First, I will examine individual concept maps for each respondent found within the snowball sample. This will be necessary to identify which, if any, of Clary, et al. (1998) factors are present among the qualitative data. Recall that the interviews and concept mapping exercises allowed for open-ended answers from respondents in order to cover as wide a breadth of factors as possible.

Because the derived motives to join the volunteer fire service may not exactly match the terminology used by Clary, et al. (1998), it will be necessary to identify what forms of these factors exist in the qualitative data as reported by respondents. The individual responses will then be coded according to the Clary, et al. (1998) factors.

Next, I will examine the individual and coded motives in order to establish the most typical strategies at play for joiners. Utilizing the concept mapping data, I will identify the most typical categories of motivations to participate within the volunteer fire service. This will rely on the previous coding of individual responses that conform to the six Clary, et al. (1998) factors. For example, if a respondent indicates that his father was instrumental in influencing his or her decision to join; this family aspect is related to the social factors as described by Clary, et al.

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<sup>2</sup> This number was generated based on the number of seconds after the minute on my watch when the interview began.

(1998). The result of this social importance related to family could result in the creation of a specific category of joiner, perhaps a “family firefighter” category. The identification and categorization of joiners will allow me to bring some basic structure to evaluate changes in future expectations for service and retention calculi (e.g., do these “family fighters” exhibit more accurate expectations for service and longer retention periods?).

For the final component of the qualitative analysis, I will consolidate individual concept maps to create a single aggregate motive map. This will create an overall picture of the motives of individuals to join the volunteer fire service. Like the individual concept maps, the aggregate maps will also be coded according to the six Clary, et al. (1998) factors. The coded map will illustrate which of the six factors are important within the decision to join. The results of the aggregated concept maps will provide the first glimpse of the reality of motives to join among volunteer firefighters and will begin to demonstrate how the Clary, et al. (1998) factors correlate to the individual responses from participants in the qualitative portion of this research. Chapter 4 will outline the qualitative motive results.

### **Quantitative Approach to Understanding Firefighters’ Motives to Join**

Building on these qualitative mapping analyses, a quantitative survey approach was created to generate the leverage necessary to generalize to my population of South Carolina volunteer firefighters. The use of quantitative analysis in this study was critical. Although the qualitative analysis of the small n snowball sample permitted a deeper and nuanced analysis of the types and forms of motives, it is not possible to draw conclusions for my population based on a small nonrandom sample. To compensate for this fact, I derived a large n random sample. Probability based samples are preferred over convenience sampling techniques. Random sampling has the advantage of generating more reliable and valid response data that makes it possible to generalize to a population (Moser and Kalton 1971).



### *Random Sample Derivation*

Although the qualitative portion of this research allowed for a more holistic examination of the factors, the non-probability snowball sampling method increases the chance of bias among the data collected (Baker 2002). To compensate for this bias, researchers often utilize probability sampling, and most typically this means random sampling. This strategy allows for all members of the population to have an equal chance of occurring within the sample (Starnes, Yates, and Moore 2010). Moser and Kalton (1971) offer that simple random sampling is generally the preferred method as it has the advantage over non-probability sampling by producing more precise estimators. Because this research studies two separate strata – 1) members of wholly volunteer departments and 2) members of mostly volunteer departments – a stratified random sampling frame was chosen. This has the benefit of adding efficiency by splitting the population into smaller populations (Baker 2002).

My analysis utilized a *restricted, proportionate, stratified random sampling* method. It was restricted, as I did not replace a selected respondent before selecting another. Because each group was held proportionate to the subpopulation magnitude, it was considered stratified. This decreases the complexity of calculations necessary to arrive at an unbiased sample estimate (Baker 2002).

I utilized the United States Fire Administration's Fire Department Census database and the South Carolina Firefighters Association database to establish the number of volunteer firefighters in the state of South Carolina. Once I compiled the estimates, I adopted a proportionate stratified sampling frame to distribute the survey. I created a database of fire departments sorted by department type/institutional structure. The state of South Carolina had 297 departments separated by two strata, which were mostly volunteer (with few career), and wholly volunteer (with no career).

According to the United States Fire Administration, 13,334 volunteer firefighters were associated with my two types of departments for the state of South Carolina (United States Fire

Administration 2013). Invoking a 95% confidence level and using a very stringent confidence interval of +/-3% yields a prospective sample size of 988 respondents. Adjusting for a projected 60% response rate, this sample size potentially increases to as much as 1646 respondents. Table 3.2 outlines the planned sample size and strata.

My research will examine two different types of departments. One of these types, wholly volunteer, possesses more members than others. As a result, it is possible that the eventual sample would consist of respondents from just a few large departments. Upon researching this problem, I found that a random sample across the institutional structure/department type would likely lead to an inaccurate representation of the population. Many researchers suggest that researchers create strata and each be closely examined prior to allocating the sample sizes to each (Kalton 1983; Kalton and Graham 1986; Khowaja, Shazia and Ashan 2011). I followed their work and decided on separating departments into the two types analyzed. I used the percentage of each stratum's composition of the overall sample to calculate the number of respondents needed from each stratum. Then, I calculated the number of respondents needed from each department based on the department's percentage of each stratum total. When added to the roster of departments, this created a list of the number of random numbers from each department sampled. This stratified sampling method insured that both types of departments were accurately sampled based on the total number of each in the population.

The particular means of generating my random sample, and selecting participants from my population of volunteer firefighters, was the subject of considerable scrutiny. To operationalize my sampling strategy, I finally determined that best approach was to email fitted lists of random roster positions to each department found within the United States Fire Administration (USFA) State of South Carolina Fire Department Census. Using my stratified sampling approach, I first generated the number of participants needed for each department. I then used the information available on the department roster size to generate a sequence of random roster slots based on the number of observations needed for each department.

I did make one crucial adjustment to my roster list sample frame in order to insure the representativeness of the sample with respect to race and gender. Given the small number of females and minorities in the fire service (i.e., 7% and 4% respectively according to the National Volunteer Fire Council) and differences associated with these groups will be instrumental to the future recruitment of volunteers, the participation announcement asked each department to forward the survey to all the females and minorities in their department to create an oversample situation within my data. Without this strategy, it is likely that the random sample would contain very few and perhaps no minorities or females to draw much needed inferences from the survey data.

On January 8, 2015, I sent the initial email to each contact containing their department's random roster positions for personnel selected to participate in the survey. I created a webpage that listed each department and the random numbers associated with the volunteer firefighters' positions on the department's roster. The webpage served as a reference for departments participating in the research. Respondents could only access the survey through a hyperlink online. Only the correspondence sent directly to each department contact contained the hyperlink to the survey. The reference website and research announcements did not contain the hyperlink to the survey and directed anyone interested to discuss their department's participation with their department contact (Chief or Training Officer). This prevented unauthorized individuals from completing the survey as only the department contact received the hyperlink to the survey. All of the correspondence with department contacts and survey participants emphasized that a random selection of volunteer firefighters in the state of South Carolina will complete the survey. It also emphasized that not every member of every department will complete the survey and directed respondents not to forward the hyperlink used to access the survey to others.

#### *Census / Sampling Issues and Adjustments*

After the initial email to my list of department contacts, I began receiving phone calls and emails from departments that indicated the number of volunteer firefighters provided by the United

States Fire Administration was overestimated. For example, a department might receive instructions to forward the survey link to its 3<sup>rd</sup>, 44<sup>th</sup>, and 120<sup>th</sup> roster spots and it only had a roster of 30 volunteers. When appropriate, I regenerated random numbers based upon the department's actual number of volunteers as reported by each department.

With some further investigation, I discovered that 42 of the departments that I could contact via telephone in fact had fewer volunteer firefighters than the number reported in the USFA data. A number of departments reported having less than 50% of the USFA reported data.<sup>3</sup> Again, when appropriate I revised the roster sampling strategy to align with the corrected department information.

While making these adjustments to the roster lists, I also sent respondent reminders via email on January 20, 2015, letters via U.S. Mail on February 2, 2015, and a final email reminder on February 23, 2015. Of the 297 letters sent via U.S. Mail, only eight were undeliverable and returned. In addition, I contacted many departments via telephone in an effort to follow up on their receipt of the survey link and survey responses as well as revise the overall population estimate for South Carolina volunteers. Table 3.3 outlines these revisions and represents the maximum number of volunteer firefighters from the original sample, although it is important to note that a number of the wholly volunteer departments were unreachable by telephone during the revision process. The survey collector closed on March 2, 2015 and my initial analysis began immediately thereafter. Table 3.3 illustrates the finalized sample information including listwise deletion for abandoned / incomplete attempts at the survey.

Table 3.3 outlines the final respondent breakdown for the stratified sampling frame. A total of 284 respondents (i.e., a raw 19% response rate) were received from the revised 1,517 requested

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<sup>3</sup> In one example, a large combination volunteer/paid department was reported by the USFA data set as having 380 volunteer firefighters. As a result, that department received 49 random numbers to be applied to their roster of 380. When contacted, the department reported having only 54 volunteer firefighters. This should have resulted in the department only receiving seven random slots in the survey. This particular department also happened to undergo a change in the institutional structure of the department. This department is now a combination department staffed primarily with paid personnel and supported by volunteers, which ultimately forced the exclusion of this department from my sample.

roster positions. This response was significantly below the projected 60% response rate. The upside, however, was that I began with a very stringent  $\pm 3\%$  margin of error and the overestimate of the number of firefighters on USFA census allowed me to pull a serviceable sample for this initial look at motives, expectations, and satisfaction for volunteer firefighters. Of the 284 initial respondents, I eventually eliminated a number from the sample to yield my final sample of 217 respondents (i.e., a refined 14% response rate). Some 39 respondents skipped all of the questions after Question 1 (Qualification question). I disqualified four respondents due to their answer in Question one (they indicated that they were not over 18 years of age and a volunteer firefighter with a wholly or mostly volunteer fire department). Twenty-three additional respondents skipped the question regarding their Department Type/Organizational Structure (Mostly Volunteer vs. Wholly Volunteer). One respondent answered all of the questions except the final question, which addressed the dependent variable (the retention measurement). A listwise deletion was used which eliminated any respondents that did not answer all of the survey questions. This was necessary in order to conduct ordinary least squares regression analysis on the retention calculus.

The revised maximum population size of volunteer firefighters in wholly and mostly volunteer departments in the state of South Carolina was 8,465. Using the revised population and final sample, I realized a sample with a  $\pm 6.6\%$  margin of error and a 95% confidence interval.

Given the likely overestimation of the number of firefighters within these departments, it also is likely that the true margin of error for the final sample is less than this 6.6% value.

The final sample ultimately contained 38 female and 21 minority respondents. Female respondents represented 17.5% of respondents and the minority respondents represented 10% of the sample. This made these two sample segments over-weighted as the population contained only 4% females and 7% minorities (United States Fire Administration 2013). As Table 3.3 illustrates, 51.2% of the respondents were from mostly volunteer departments while 48.8% were from wholly volunteer departments.

Given the intentional gender and race oversample, I will incorporate observation weight during the linear regression analysis to compensate for over/under-representation within my sample. I will calculate the case weighting by dividing the population percentage by the sample percentage, which is a generally accepted method (Hector and Maletta 2007; Kalton and Flores-Cervantes 2003; Pfeffermann, Skinner, Holmes, Goldstein, and Rabash 1998). The total weight, which was the product of each individual weight (institutional structure/department type, gender, and race), was calculated and applied to each case based on the categories to which each respondent belonged.

#### *Recording Responses to the Survey Instrument*

Survey Monkey was the online provider used to conduct the survey. The results from the qualitative analysis portion of this research were used to produce a series of prompts related to the six Clary, et al. (1998) factors. The survey asked respondents to retrospectively rate the importance of each factor at the time of their joining the volunteer fire service. I randomized the prompts to reduce any question order bias. The survey permitted multiple completions from a single IP address, as it was possible that multiple volunteers would complete the survey from a single computer, perhaps at their fire station. Appendix F contains the survey instrument.

#### *Quantitative Motives Analysis*

The quantitative motive analysis will begin with the translation of the qualitative interviews and concept mapping results into the survey instrument. This translation will take the most important and/or satisfying motives identified in the qualitative results and use them as prompts in the survey instrument. I will develop the prompts at the level of individual responses from the qualitative interviews and concept mapping exercises. The aggregates, coded to Clary, et al. (1998), will not be used in the development of survey prompts because of their broad nature. One cannot expect a survey respondent to answer questions regarding the importance of values motives generally. Instead, the survey prompts respondents regarding the qualitative individual responses specifically (i.e., helping others, serving as a role model, etc.).

The analysis will then examine the aggregate response data for those motives to join found within my sample. This type of analysis will be used to understand the relative influence and magnitude of the Clary, et al. (1998) factors within a representative sample of South Carolina volunteer firefighters. Using tables of descriptive statistics and appropriate figures, I will explicate the most typical motive response sets. Next, tables and figures will be used to differentiate these motives on the basis of different criteria such as friends/family in service, fellowship / brotherhood, helping others, sense of civic responsibility, improving self, excitement, being part of valued public service, feeling of accomplishment, having resources others do not, seek full-time employment, money (stipend, reimbursement), acquiring/applying new skills, and obtaining training. I will then illustrate the innate differences in motives that exist amongst the derived categories of joiners associated with my concept mapping exercise.

This chapter on motives will then provide a mixed methods overview of the knowledge I have gained from the simultaneous use of qualitative and quantitative techniques and offer a synthesized set of conclusions on those motives that drive individuals to volunteer in the South Carolina fire service.

### **Qualitative Approach to Understanding Firefighters' Expectations to Serve**

As previously discussed, understanding motives to join the volunteer fire service represents only one step toward reversing the decline of volunteer firefighter numbers. Though motives are important to recruitment, this research assumes that motives are uninformed and largely naïve. Only after an individual joins and serves for a period of time, do motives transform into fully informed expectations to continue serving. The initial catalyst that brings about an action of volunteering can be widely different from what keeps a volunteer engaged (Barraza 2011; Omoto and Snyder 1995). Therefore, understanding the range of expectations to continue serving as a volunteer firefighter is essential to this research. After all, these departments must do more than merely supplement their rosters of volunteers. They must also maintain their rosters of volunteers

whom they have expended a significant amount of time and effort to train and make competent for service.

The qualitative approach to understanding firefighters' expectations to serve began with a continuation of the interviews and concept mapping exercises. Recall that the snowball sampling method produced two categories of respondents. I interviewed all respondents regardless of their length of service. Those with two years or less of service only completed a motive ( $t_0$ ) concept map. Those with more than two years of service also completed an expectation ( $t_n$ ) concept map.

#### *Concept Mapping Exercise for Expectations to Serve*

Like the motive maps, I recorded participant's expectations to continue serving based upon their interview responses. I documented expectations with low importance on small (2" x 3") index cards. I recorded expectations with moderate importance on medium (3" x 5") index cards and large index cards (5" x 7") represented highly important expectations to serve (see Figure 3.3 for a sample index card). I did not record unimportant expectations in the participant's concept map. To reduce the bias of the previously constructed motive maps may have caused, respondents constructed expectation maps from a newly blank map space. This prevented respondents from simply manipulating their previous motive map to construct a corresponding expectation map. Each respondent began their expectation concept map by listing important expectations to continue service using the procedures and index cards outlined above. Once the respondent's expectation concept map was completed, I reviewed each motive index card that was not included in the expectation map with the respondent to identify what, if any, importance it played as an expectation to serve in contemporaneous sense. This insured that the respondent did not omit any factors that were important as motives from their expectation map. The respondent then arranged the index cards into their expectation map, which represented the relationships between each expectation to continue serving in the volunteer fire service. The map was then labeled as representing time  $n$  ( $t_n$ ) where  $n$  was equal to the number of years of service the respondent possessed in the volunteer fire service.



Once the expectation map was constructed, I asked the respondent to insure that the concept map included all concepts or factors related to their expectations to continue serving in the volunteer fire service. I added any additional expectations and changes were made until the respondent was certain the concept map accurately represented their expectations to serve. I then labeled the concept map with the respondent's identification number, previously established during their interview and motive map construction. Finally, I documented the expectation concept map using photography.

### *Qualitative Expectations Analysis*

The qualitative expectations analysis will be consistent with that of the preceding qualitative motive analysis. First, individuals' concept maps will be analyzed in order to identify how their responses about contemporary expectations correspond to the six Clary, et al. (1998) factors. When individual responses are ambiguous, I will translate those responses and code the data in order to determine what forms these factors take at the mature and informed state of service. Next, I will examine the individual motive ( $t_0$ ) map and its corresponding expectation ( $t_n$ ) map to draw some observations about the transformation of naïve motives. For example, I am interested in knowing whether those mobilized by values motives tend to continue to emphasize that value orientation as expectations, whether risk or excitement oriented volunteers experience fade throughout their service time, etc. The qualitative analysis of expectations will offer some initial insights on these types of questions.

Finally, I will consolidate the individual and coded expectation responses into an aggregated expectation concept map. This will provide an overall illustration of the expectations to continue serving that exists among the most typical respondent. Like the motive aggregate maps, the individual expectation concept maps can provide specific examples of the transformation of motives to join into expectations to serve. The aggregated expectation map, coded to the six Clary, et al. (1998) factors, will illustrate the correlation of the individual responses to the

framework used throughout this research. Chapter 5 will outline the qualitative expectation results.

### **Quantitative Approach to Understanding Firefighters' Expectations to Serve**

The quantitative analysis of volunteers' expectations to serve will yield conclusions about my population of South Carolina firefighters. Although the qualitative analyses will offer me key insights about these influences, the quantitative analysis will provide a more robust examination within a more representative sample.

#### *Querying Expectations*

The survey instrument prompts, outlined in Chapter 4, will be based upon the qualitative results and were translated to the six Clary, et al. (1998) factors. These same fire service prompts will be used to query respondents about the magnitude of importance within their contemporaneous expectations that must be met to continue serving as a volunteer firefighter. The results of these prompts will then provide me with leverage about how expectations to continue serving develop from the initial motives to join the service.

#### *Quantitative Expectations Analysis*

Following the quantitative motive analysis, the quantitative analysis of expectations will yield a similar set of analysis that reference the contemporaneous context. First, I will analyze and explicate the descriptive statistics of the mature expectation responses. These responses will be aligned with the six Clary, et al. (1998) factors. Analysis of individual and coded responses will have an emphasis placed on the relative movements of the importance of expectations as they relate to their initial importance as a motive to join.

Next, I will use tables and figures to explicate the independent variable relationships. This will allow for examination of expectations among respondents based on gender, race, institutional type, and other important definitional criteria. While controlling for these factors, I will present these data in ways to leverage any systemic differences that may exist on the basis of demographic characteristics or group identities. Any large variances will indicate a highly

influential independent variable. I will then conduct a closer analysis in order to identify the expectations of higher importance among each sub-group.

I will also seek to understand the balance of expectations for those categories of joiners that I derive in the motives analysis. My intent in this section is to understand how the most typical types of volunteers develop and are altered by their service. For instance, I might seek to understand whether those naïvely pursuing excitement and risk change with prolonged exposure to the day-to-day environment. I might also be interested in whether they become more like those with alternative motives to serve.

Lastly, Chapter 5 will provide a mixed methods overview of the knowledge gained throughout both the qualitative and quantitative analysis as it relates to expectations to continue serving.

Both methods will provide data that help to explicate the relationships between motives to join the volunteer fire service and expectations to continue serving in the volunteer fire service. This composite analysis will speak to my hypothesis that initial motives are raw and inexperienced, and that expectations are developed as a result of service are quite different. Analyzing this drift of motives into expectations will contribute valuable knowledge that will help improve our targeting of prospective volunteers.

### **Qualitative Approach to Satisfaction and Retention**

Understanding motives to join and expectations to serve in the volunteer fire service is paramount in reversing the declining trend of volunteer firefighters. However, this research also seeks to understand and assess a current level of satisfaction among volunteer firefighters. Recall that satisfaction is a function of having important expectations met. For example, if a volunteer firefighter thinks that selflessly serving others is important, their expectation is only met if they are given opportunities to participate in altruistic activities. Simply, the result of the department providing those opportunities and meeting the volunteer's expectation provides the volunteer satisfaction. This research used the same mixed methods approach to identify satisfaction of

volunteer firefighters across the previously established factors and examined their relationship to retention.

### *Concept Mapping and Satisfaction*

The previous qualitative analysis set the stage for measuring satisfaction. In fact, I recorded satisfaction with a factor at almost the same time expectations were recorded. For those with more than two years of service, I documented expectations within a concept map from a blank space once documenting their motive to join concept map was complete. As I recorded each expectation, I also documented a satisfaction level with that expectation. Recall that documentation of expectations with low importance occurred on small (2" x 3") index cards, expectations with moderate importance were recorded on medium (3" x 5") index cards and large index cards (5" x 7") represented highly important expectations to serve. I did not record unimportant expectations in the participants concept map. It is assumed that unimportant expectations do not generate any level of satisfaction for the research participants and therefore were not considered during the collection of satisfaction levels.

To illustrate satisfaction, I used a colored dot in the top right corner of each index card. Green dots represented high levels of satisfaction, yellow dots represented moderate levels, red dots represented low levels, and no dot represented no satisfaction. Figure 3.4 illustrates the expectation concept map with satisfaction levels recorded.

The mapping portion of the qualitative exercise followed the satisfaction assessment. The respondent was asked to arrange the index cards into a contemporary expectation map that represented the relationships between each expectation to continue serving in the volunteer fire service. This map addressed the magnitude of import (i.e., the size of the card) and the resulting level of satisfaction with each concept (i.e., the colored dot stickers in the tab). After a process of querying the participant and explication of the map, it was labeled as representing time  $n$  ( $t_n$ ) where  $n$  was equal to the number of years of service the respondent possessed in the volunteer fire service.

### *Qualitative Satisfaction Analysis*

With the qualitative expectation analysis complete at this point, I will now evaluate the highest sources of satisfaction among respondents, which is instrumental to successful recruitment and retention of these volunteers. The individual expectation maps will be evaluated with respect to Clary, et al. (1998) factors.

The first analysis will evaluate the individual responses and the satisfaction levels associated with each expectation to continue serving. Respondents recorded their satisfaction levels on the same index cards used for documenting expectations. Then, the analysis will identify any variances associated with demographic and institutional categories.

Next, this analysis will further ascertain if there was any correlation with the typology of joiners previously identified in the motive and expectation analysis. For example, this analysis may identify if values driven respondents reported higher satisfaction levels than those who continue serving because of an expectation based on enhancement factors, such as excitement or personal accomplishment. This will allow for comparison of respondents and their associated satisfaction based upon the importance levels they placed on each factor.

Finally, I will analyze the individual and coded expectation aggregate maps to evaluate the levels of satisfaction among the individual and coded factors. The coding of individual responses of satisfaction levels to the Clary, et al. (1998) factors will not be necessary as the expectation index cards, on which the satisfaction level was documented, will be coded during the expectation analysis. Instead, I will only need to calculate the satisfaction levels for each aggregated coded expectation. The aggregate maps will represent an overall illustration of important expectations to continue serving among the qualitative sample respondents. Through these aggregate maps, I will be able to begin to understand who is most satisfied from the perspective of the qualitative analysis. Perhaps equally as important, this analysis will identify respondents who were dissatisfied. Although the expectation aggregate maps will illustrate which factors are important

to the qualitative participants, the qualitative satisfaction analysis will demonstrate which factors provide the highest levels of satisfaction for respondents.

### **Quantitative Approach to Satisfaction and Retention**

As the literature revealed, retention of volunteers is a direct result of the generation of satisfaction amongst volunteers. The qualitative analysis will begin to provide knowledge of satisfaction among volunteer firefighters, but this final quantitative analysis will yield the generalizable conclusions with respect to satisfaction and more importantly retention. The quantitative analysis will conduct a rigorous falsifiable test of volunteer satisfaction on the retention calculus and help me develop an overarching strategy for the recruitment of volunteers that are more likely to have mature expectations that can be met and are more likely to experience high levels of satisfaction with their service.

The survey instrument will yield three separate bits of information for each response item associated with a factor: 1) the historical importance of the item as a motive to join; 2) the contemporaneous importance of the item as an expectation to serve; and 3) the contemporaneous satisfaction with this item. This sequence of data will be recorded for each response item within a singular frame that poses a trio of prompts to the respondent (see Figure 3.5).

Each of my derived response items from the qualitative analysis will be randomly presented within the survey instrument. The survey instrument will capture satisfaction in a similar manner as the qualitative concept maps. Each respondent will respond whether the item provided them high satisfaction, moderate satisfaction, low satisfaction, or no satisfaction. The survey directed respondents to select no satisfaction for any factor that they indicated was not important. Again, this assumed that unimportant factors did not provide satisfaction to respondents. Upon compiling the data, I will change any satisfaction responses to none for corresponding expectation importance levels of none.

### *Quantifying Satisfaction*

With the motive import, expectation import, and level of satisfaction recorded for each item, the next step will be to generate numeric expressions of satisfaction. I will construct the satisfaction measurement in two ways. First, I will reference satisfaction levels versus the respondents expressed import as an initial motive to join. This will illustrate levels of satisfaction among respondents with particular motives to join. Then, the analysis will examine current expectations to serve and their associated levels of satisfaction among respondents. I eventually will use these measures of aggregated satisfaction to explain variance in the prospective retention period to understand how to make policy changes to improve recruitment practices.

To account and control for satisfaction, I will create five aggregate indices. This will allow for a multi-faceted analysis of satisfaction in an isolated sense and in versions that reference naïve motives and informed expectations. The first satisfaction measurement will simply be the mean of the ordinal satisfaction responses that make up the six Clary, et al. (1998) factors. This will begin to separate which of the six factors are better at generating satisfaction among my random sample of respondents. Table 3.4 outlines the mean calculation of satisfaction from the disaggregated factors and their associated items that represents the first aggregated index.

#### Satisfaction versus motive import

For the second aggregated index, I will measure satisfaction based on motives to join by analyzing direct satisfaction levels based on the aggregated individual ordinal responses for satisfaction. This will identify which motives to join are associated with higher satisfaction levels. This index will also capture any variance between importance of motives to join and overall satisfaction reported. This will be important for both initially unimportant motives that are ultimately highly satisfying, but also for important motives to join that provide low satisfaction. Recruitment efforts could improve from the results of this analysis.

First, I will record and total ordinal motive importance and satisfaction levels for each response item. Weights will be assigned based on satisfaction responses and the calculations will yield an

overall direct satisfaction score for the respondent based on their motives to join. This aggregated index measurement provides an overall satisfaction calculation representing the direct differences between motive importance and satisfaction for each response item. Table 3.5 illustrates the calculations associated with the second aggregated index measurements.

The third aggregated index will consist of measuring the relative improvement of reported motives to join and their eventual satisfaction. The third aggregated index measurement will not assign weights based on the satisfaction score as in the second aggregated index. Instead, the third aggregated index will assign weights based on the difference between the motive and satisfaction that considers the relative improvement from motive to satisfaction. This relative satisfaction score will represent the respondent's overall satisfaction relative to the difference between the importance of each motive to join and the eventual satisfaction reported for each factor. Where the second aggregated index will consider the overall difference between the importance of motives to join and their eventual satisfaction, this index considers the relative improvement or decline of each response item as part of its measurement. Table 3.6 outlines the relative improvement calculations for motives to join within the third aggregated index measurement.

#### Satisfaction versus expectation import

The measurement of satisfaction based upon expectations will occur in a similar manner as the analysis of the motive / satisfaction relationship. I will measure expectations and satisfaction using the same two methods, direct measurement and relative improvement. First, I will create a measurement of direct satisfaction as it relates to each respondent's expectations to continue serving. Then, I will calculate the measurement for the relative improvement of overall satisfaction from expectations to continue serving. Like the motive / satisfaction analysis, this expectation / satisfaction analysis will identify expectations to continue serving associated with higher satisfaction levels. It will also capture any variance between importance of expectations to serve and overall satisfaction reported. This, too, will be important for both unimportant



expectations that are ultimately highly satisfying as well as important expectations to continue serving that provide low satisfaction. The results of this analysis will be beneficial to retention improvement.

For the fourth aggregated index, I will record and total ordinal expectation importance and satisfaction level responses for each response to create an overall direct satisfaction score for the respondent based on their expectations to continue serving. The fourth aggregated index will calculate the direct differences between the overall expectation importance and satisfaction scores for each respondent. Table 3.7 illustrates these calculations associated with the fourth aggregated index.

The fifth aggregated index will consist of a calculation of the relative improvement among the individual responses will follow the structure of the relative motive / satisfaction measurement, with weights being applied to the differences between expectation importance and satisfaction. This considers the relative improvement of expectations and satisfaction for each response item instead of simply examining the overall difference between expectations and satisfaction as a direct measurement that the fourth aggregated index will perform. The relative satisfaction score calculated in the fifth aggregated index will assess the respondent's overall satisfaction relative to the difference between the importance of each expectation to serve and the eventual satisfaction reported for each factor. Table 3.8 outlines the relative improvement calculations from expectations to satisfaction that makes up the fifth aggregated index measurement.

#### *Modeling the Retention Calculation*

These five separate expressions of satisfaction will be used as explanatory variables in empirical models of individuals' retention calculi. In order to measure the length of retention for respondents three questions in the survey were included: 1) How likely are you to be serving as a volunteer firefighter in one year?; 2) How likely are you to be serving as a volunteer firefighter in five years?; and 3) How many years from now do you anticipate ending your service as a volunteer firefighter? The first two questions were recorded as ordinal response sets using a

quasi-Likert scale (i.e., highly likely, moderately likely, somewhat likely, and not likely). The third question allowed respondents to provide an open-ended continuous response. Using these responses, I will perform regression analysis to yield generalizable conclusions regarding retention for the population of South Carolina firefighters.

The first step in modeling retention is the construction of the dependent variable, which to improve validity and reliability, is the product of these three different indicators of the individuals' retention period. Given that two of the retention measures are recorded in ordinal responses, it will be necessary to construct a combined service length measurement that incorporates both ordinal responses and the continuous measurement.

For the first component, I will calculate the response by considering the ordinal level response to the first retention question (likelihood of remaining in service in one year) and the continuous response to the third retention question (number of years from now that the respondent will end their service). The value will consider the individual response for the first retention question while the calculated weight will consider the continuous response to the third retention question. The results of this first component will serve as only the first part of the overall combined service length measurement.

I will calculate the second measurement like the first and will use the second ordinal retention response regarding the likelihood that the respondent will be serving as a volunteer firefighter in five years. Like the first measurement, the value of the second measurement will consider the response to the second retention question while the weight will consider the continuous response to the third retention question. The calculation here will serve as the second of the three combined service length measurement components.

Finally, the third component will record the number of years from now the respondent anticipated ending their service as a volunteer firefighter. This will be a continuous response and the measurement will simply take the value of the response. The weight will be equal to one for each respondent, which will make each respondent's estimated number of years of service remaining

the value for the third measurement. The weight will remain unchanged throughout the analysis, as the third retention question was the most precise estimator of the number of years of serving remaining.

I will combine the three measurements above by totaling the values and weights then dividing the sum of the values by the sum of the weights. The quotient will produce the years of service remaining after considering all three retention questions. This calculation will be the combined service length measurement and will effectively combine the first and second ordinal responses with the third response to create a continuous variable for each respondent. This variable will be the combined service length measurement and will serve as the dependent variable for the regression analysis. The combined service length measurement calculations are listed in Table 3.9.

#### *Estimation Strategy and Weighting*

With the combined service length measurement index calculated in the form of a continuous estimate of each individual prospective retention period, I will utilize Ordinary Least Square (OLS) regression technique to draw inferences versus expressed measures of satisfaction and a host of other control variables. OLS offers an efficient and robust methodology that is not overly sensitive to violations of its underlying assumptions (Morley 1997). It also performs well when compared to more complex estimation techniques (Consigliere 1985; Kiers 1997; Morley 1997). Schafer and Graham (2002) suggest that OLS regression is problematic with missing data. For this research, however, this was not a concern as list wise deletion affected mostly incomplete entries and did not result in substantial loss of data.

The one issue with OLS estimation that needed to be addressed was the effect of my stratified sampling frame and my gender and race oversample. I asked each department contacted during the quantitative methods of this research to have all of their willing women and minorities complete the survey instrument. Without this, it was possible that no minorities or females would have been part of the quantitative sample because of the random selection technique used.

Therefore, it was likely that the final sample consisted of a higher percentage of minorities and females and a lower percentage of white males than what existed in the true population.

Additionally, I anticipated that the survey response rate would be far below 100%. As a result, it was also likely that the final sample did not contain the appropriate numbers of wholly volunteer and mostly volunteer respondents calculated during the probability sampling methods.

As Kiers (1997) outlines, Weighted Least Squares (WLS) estimation would be required in this instance to account for the underlying difference in respondents for my sample versus the population of South Carolina volunteers. Most researchers (Kalton and Flores-Cervantes 2003; Maletta 2007; Pfeffermann, Skinner, Holmes, Goldstein, and Rabash 1998) suggest application of a weight that reflects a ratio of the population percentage versus the sample percentage for each factor (i.e., institutional structure/department type, gender and race). With this in mind, I divided the percentage of each factor in the population by the percentage of the factor in the sample. I then multiplied the quotients of those three calculations together and the product of this calculation was the total weight for the individual observations. The total weight of each respondent was determined based upon their gender, race, and department type. Table 3.10 outlines the weighting calculations.

#### *Model Specification*

Using the WLS strategy, I will estimate parameters and draw inferences for five different model specifications. The first regression model will consider the disaggregated satisfaction measures. These disaggregated satisfaction measures will be the mean averages of the six Clary, et al. (1998) satisfaction responses. This will show the effects of the six Clary, et al. (1998) satisfaction responses on the dependent variable, which is the combined service length measurement and calculated retention. The results from this model will simply explain the effects of the aggregated Clary, et al. (1998) factors on the dependent variable. For example, this model may show that satisfaction from values factors or social factors are statistically significant and have a positive effect on the dependent variable (years of service remaining). Perhaps

increasing satisfaction one level (i.e., from moderate satisfaction to high satisfaction) will result in an increase of one year of service remaining. Model one examines the Clary, et al. (1998) factors and their effects on retention.

The second model will involve regressing the direct satisfaction levels based on the aggregated individual ordinal responses for individual response satisfaction illustrated in Table 3.5 on the dependent variable. This model analyzes all of the individual responses related to motives to join and the eventual satisfaction overall. If statistically significant, the results will show how one level of importance or satisfaction among these individual items will affect the dependent variable (years of service remaining). For example, we may find that an increase in one level of importance for a motive to join, as it relates to the satisfaction from the same response item, will result in one-half year of service remaining. Model 2 examines the second aggregated index's effects on the combined service length measurement, which served as the dependent variable and measured years of service remaining.

The third regression model will analyze the relative improvement calculations for motives to join within the third aggregated index measurement outlined in Table 3.6 and its effects on the dependent variable. The results of this model will demonstrate the effects of the motives to join and the improvement in their eventual satisfaction. For example, we may find that an increase in improvement from motive to satisfaction creates an additional two years of service remaining. This would speak to the effects of satisfaction related to motives to join and retention of the volunteer firefighter.

Next, the fourth model will consider the overall direct satisfaction score for the respondent based on their expectations to continue serving (illustrated in Table 3.7) regressed on the dependent variable. This model will use the fourth aggregated index measurement to outline the effects of importance as an expectation to continue serving and the satisfaction from service for each response item. These results could demonstrate that an increase of one level in the satisfaction could result in an additional year of service, if statistically significant.

Finally, the fifth regression model will regress overall satisfaction relative to the difference between the importance of each expectation to serve and the eventual satisfaction reported for each response item, as calculated in Table 3.8, on the dependent variable. Model five will illustrate the effects of the improvement from expectation importance to eventual satisfaction for each response item. For example, we may learn from model five that a moderately important expectation that is highly satisfying will result in an additional three years of service remaining. While model one will provide the basic understanding of the satisfaction of the Clary, et al. (1998) factors and its effects on remaining years of service, models two through five are more innovative. Models two and four will use direct measurements of motive and expectation importance, respectively while examining the individual response items. This is an advantage over model one, which will only consider the average satisfaction of the aggregated, coded Clary, et al. (1998) factors. Models three and five will take this analysis even a step further by considering the relative improvement of motives and expectations, respectively. Models three and five will analyze the motive and expectation importance improvement to eventual satisfaction. This improvement analysis has an additional benefit over Models two and four, which only consider the individual response items overall.

#### *Controlling for Alternative Explanations of Retention*

In addition to the relationship between satisfaction and retention, I also will include control variables that account for a series of alternative hypotheses suggested by the existing literature. In this case, I am concerned first with the effect of motives, expectations, and satisfaction on retention. However, I am also interested in the constituent effects for a host of other explanations (e.g., department type, years of service, demographics, family status, legacy effects, risk and selective benefits). Control variables related to these explanations will be included in the five model specifications outlined above. These added variables serve as tests for alternative hypotheses and capture variance not related to satisfaction.

### Controlling for Age and Years of Service

Age and years of service were important control variables for this research. Age could have a positive or negative effect on my dependent variable measuring retention. Meyer (1957) separates individuals into Young Adult (20-35), Middle Years (35-50), Free Years (50-65), and Senior Citizenship (65+). According to Meyer (1957), young adults have a concern for vocational skills, marriage, and they feel a responsibility to participate in outside activities likely related to the community. Young adults are more likely mobile due to their work, which makes them less likely to be available to serve in their own communities. "Middle years" individuals are more likely to participate in activities driven by their children and work. They are more stable than young adults are. "Free years" persons have more time available to participate in activities of their choice. Senior citizens are the most stable and have various hobbies and activities.

Erikson (1997) separates the ages of individuals by the Young Adult (19-40), Middle Adult (40-64), and Late Adult 65+. Young adults are less stable due to the romantic and family relationships they have with others. Middle Adults are more stable as they have an established job and family. Late adults are the most stable and may seek community activities that are productive and help them to justify their successful lives, if necessary.

Shulman (1975) groups individuals by Young Adults (18-30), Middle Adults (31-44), and Older Adults (45+). Young adults are more mobile but are also more likely to be interested in activities not involving family. This is an important point when considering the social factors of families serving in the volunteer fire service. Middle adults are more stable due to family obligations, and older adults are the most stable due to established work and family. Shulman (1975) mentions that age is not a strict qualifier. For example, someone at age 20 can have an established job and family that roots him or her in the community.

There is a correlation between the years of service variable and age. Obviously, a volunteer firefighter cannot increase their years of service without becoming older. It is difficult to know how each year of service affects each age group. Perhaps the younger age group extends their

retention by way of each additional year of service. For younger volunteers, each year of service increases their level of knowledge about the fire service and may make it more likely that they would continue volunteering.

Conversely, older volunteers may have their retention decreased by additional years of service. Maybe as a volunteer gets older, their exposure to risk, injury, and increased call volumes, coupled with accumulated service time makes it more likely that the volunteer would begin to feel that it is time for other younger members of the community to join the service. This may decrease the older volunteer's remaining years of service.

Overall, there was a need for a method to control for both of these important variables. The solution to controlling for age and years of service came from creating a variable that will interact both age and years of service. I used the mean average of the respondents' ages in the random sample to create four variables separated by a standard deviation of the ages of sample respondents. Then the difference will group the respondent under one of the four variables created. The value for the variable will simply be the years of service that the respondent possessed. I will calculate this by subtracting the year the respondent indicated they began service from 2015. This interactive variable will account for the correlation and will separately control for years of service in these different age groups.

#### Controlling for Institutional Characteristics

According to Kaufman (2012), institutionalism relates to rules, norms, conventions, networks, social groups and formal organizations. Group effort and governance ultimately decide on the distribution of resource in these institutions (Commons 1934). Samuels and Schmid (1981) posit that determining whose interests' are of concern is politically contested and constructed. This process generally favors the power-holders, including the wealthy, managers, etc. The type of population that comprises a community can have a great effect on the opportunity to volunteer and more importantly the retention of volunteer firefighters.



In urban and sub-urban areas, career/paid firefighters may supplement volunteer firefighters. These areas also have a much larger tax base from which it can offer a higher number of services such as emergency medical services, technical rescue, and hazardous materials mitigation/weapons of mass destruction response. These additional services require a higher level of training beyond standard structural firefighting. Volunteer firefighters may find over time and through urban sprawl that their department, once a wholly volunteer department in a rural area, transforms into a mostly volunteer department in a sub-urban or urban area. The result of this requires a higher level of commitment and training on the part of the volunteer to work alongside their paid counterparts. Furthermore, the career firefighters in their departments may begin to handle emergencies without the assistance of volunteers. For those who only desire continually to serve their community, they may find that they no longer have the same opportunities to do so because of increased call volumes and an increase in the types of services offered by the department. The local fire department, like all institutions, will add career/paid firefighters as the power-holders decide that it is necessary to serve the community. The population type will drive the tax base available to change a department from wholly volunteer to mostly volunteer.

In a rural area with limited public revenues, adding paid firefighters is likely not feasible. Conversely, in a sub-urban or urban area, where many residents and businesses exist, tax monies are higher and career/paid firefighters may improve the services. When the volunteer firefighter that was not physically capable of participating in firefighting activities any longer and only drove the fire truck to calls no longer has an opportunity to drive the fire truck to calls because it is staffed by career/paid firefighters 24-hours a day, it will likely affect their retention negatively. This is not likely to affect rural areas that lack the tax base to add paid/career firefighters wherein volunteers have a civic responsibility to help others or no one will. In this case, there are also no paid/career firefighters to drive apparatus, meaning this task falls on the volunteer. This gives the volunteer that can only drive apparatus a continued feeling of helping others. The rural areas are

also more likely to have minimal call volumes compared to suburban/urban areas, which minimizes the time demands and impacts on the volunteer. As a result, the survey instrument collected department type and population type from each respondent. Table 3.11 outlines the questions used to collect this information.

#### Controlling for Respondent Characteristics

As the literature revealed, the choice to volunteer as a firefighter and remain engaged in the fire service can differ greatly from person to person. This may simply be a choice between serving others' needs versus serving one's own. Acheson (2006) terms this collective-action dilemma. It represents a divergence between the interests of the individual and that, which is optimal for the community or the larger group. In some situations, rational behavior would mandate a prioritization of individual needs above the communities. For example, respondents that are married with children will likely have family responsibilities that frequently must take precedence over serving the community. Despite the nobility of putting one's family ahead of the remainder of the community, an individual's decision to do so is collectively disastrous (Elster 1989; Taylor 1990).

Several other variables could influence an individual's retention in the fire service. These include gender, race, family history of firefighting, continuous versus intermittent service, and full-time employment in another fire department. As a result, the survey instrument collected these variables, along with the aforementioned marital and parental statuses. Respondent characteristic variables will be included in the regression models to evaluate their effects on the combined service length measurement/dependent variable. Table 3.12 outlines these variables and the survey instrument questions used to collect the information on respondents.

#### Controlling for Socialization, Risk and Selective Benefits

Socialization may have a tremendous influence upon retention and the dependent variable. Recall that Schmid (2002) advocates that social actions, such as choosing to remain engaged as a volunteer firefighter are the result of three possible expectations: sympathy, norm, or reward.

Sympathy would tend to favor the Clary, et al. (1998) factor of altruism, while reward may favor the enhancement or career factors. The norms warrant special attention. As this research has established, long before paid/career firefighters, it was the responsibility of every able bodied male to participate in firefighting activities. Today, in small communities that lack the tax revenues and infrastructure, this may still be the case as it is the norm. This responsibility raises the question of societal coercion of the volunteer (Mendenhall 2009). The question that arises though is how many other institutions or organizations require volunteers to participate in those communities as a norm.

In smaller communities, churches and other civic groups often recruit volunteers to operate efficiently. It is intuitive to assume that one who volunteers in one organization would be willing to continue volunteering with the local fire department, which would have a positive effect on retention and this study's dependent variable.

However, volunteers have a finite amount of time with which they can devote to volunteering. Therefore, in cases where an individual volunteers in multiple organizations, the volunteer fire department becomes a competitor for the individual's precious time. Therefore, it is also possible that volunteering in multiple institutions could have a negative effect on retention and the dependent variable.

The survey instrument collected information regarding other civic organizations to which respondents belonged. The survey question allowed for an open-ended response. This enabled a closer analysis of the types of other civic groups to which the respondent belonged. However, I will code the responses into an interval variable that will use a whole number to represent the number of other civic groups to which the respondent belongs. This variable will be included in the regression models.

Participation in high-risk activities can often provide satisfaction to individuals who are thrill-seekers / excitement junkies (Barlow, Woodman, and Hardy 2013). It is likely that experiencing or witnessing an injury or near-death event in the fire service can enlighten volunteer firefighters

to the inherent risks associated with being a firefighter. If bearing witness to or experiencing a narrow escape such as this affects the volunteer, it would in one of two ways. Either, it would provide satisfaction by reinforcing the satisfaction that risk-takers seek and therefore improve retention (Aksoy and Weesie 2012), or it could discourage risk averse volunteers from future participation because of their fear of injury or death, thereby decreasing retention (Dover 1982). Because of the influences that witnessing or experiencing an injury or near-death experience can have on my dependent variable, the survey instrument collected this information about respondents and the results will be included in the regression models and analysis. The survey instrument had two questions related to risk. First, it queried respondents if they had witnessed a firefighter experience a severe injury or “close call” (that almost resulted in severe injury). Then, it asked respondents if they had experienced severe injury or “close call” (that almost resulted in severe injury) during service.

Finally, volunteer firefighters often use warning lights, sirens and radios in their personal vehicles. The purpose of this is so that they can respond to emergencies from their homes or regular places of business, take exemption to traffic laws so they can arrive more quickly, and communicate with the other incoming units upon arrival. The warning light, siren and radio may be a source of excitement for the volunteer.

Beyond that though, this equipment could be considered a status symbol. In the volunteer firefighter’s personal vehicle, even when the warning light is not flashing, it represents that the occupant of the vehicle is a volunteer firefighter. Additionally, many departments do not allow its members to place this equipment in their personal vehicles before they complete basic firefighter training. The logic behind this is that before a volunteer completes training, they cannot take exemption to any traffic laws while responding to an incident. Therefore, in many cases, this equipment in a personal vehicle identifies that the occupant of the vehicle is not just a volunteer firefighter, but also a fully indoctrinated volunteer firefighter. This status symbol may have an effect on retention and the dependent variable in this research.

Though some departments provide warning lights, sirens, and radios to their volunteers for placement in their personal vehicles, many volunteer firefighters invest their own money, earned from their regular occupation, to purchase the equipment. This financial investment is typically not negligible. Today, warning lights and sirens can cost hundreds if not thousands of dollars. The costs of portable and mobile radios vary depending on the type of system the department utilizes, but can cost as much as \$5,000.

This research examines the investment of individuals in the volunteer fire service based on internal factors. It is also likely that making such a large external and financial investment such as this would have a positive effect on the retention of the volunteer. Consequently, the survey questioned respondents on the presence of warning lights, sirens, and radios in their personal vehicle and whether the department provided the equipment. Table 3.13 outlines the socialization, risk and selective benefits survey questions.

### **Understanding Motives, Expectations, Satisfaction and Retention**

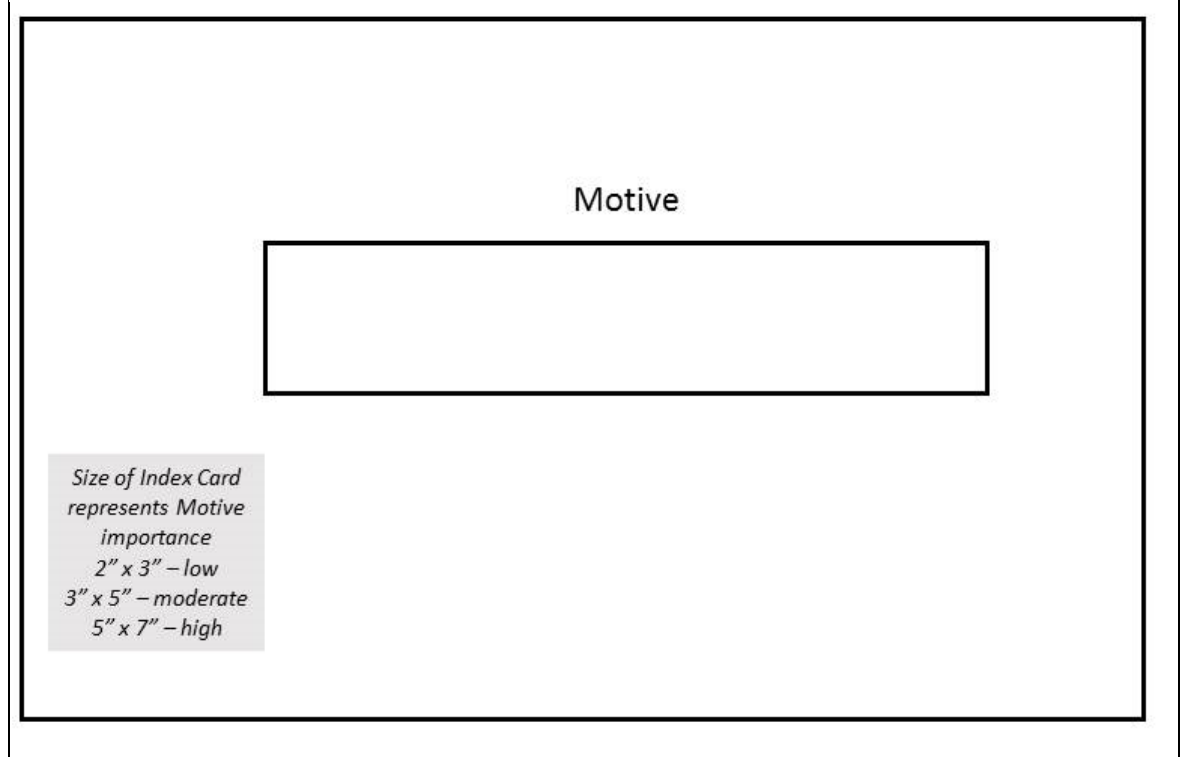
Volunteer firefighters are essential to public safety in the large majority of communities across the country. The number of volunteer firefighters is in a state of decline. Past research on this decline has examined individual fire departments with successful recruitment and retention programs. As the literature reveals, there is no “silver bullet” or “one-size-fits-all” solution to reversing this decline of volunteer firefighters as the motives to join, expectations to continue serving, and sources of satisfaction may be different from one individual to the next. As a result, this research conducted analysis of the individuals serving to understand these motive, expectation, and satisfaction calculi.

While taking solely a qualitative approach to this analysis would have provided a deeper, more holistic understanding, the small sample associated with the qualitative analysis may not have been generalizable to the entire population. Using a quantitative approach with a large sample would increase external validity but may not uncover a specific factor that may only be identified using qualitative methods. As a result, this research took a mixed methods approach and utilized

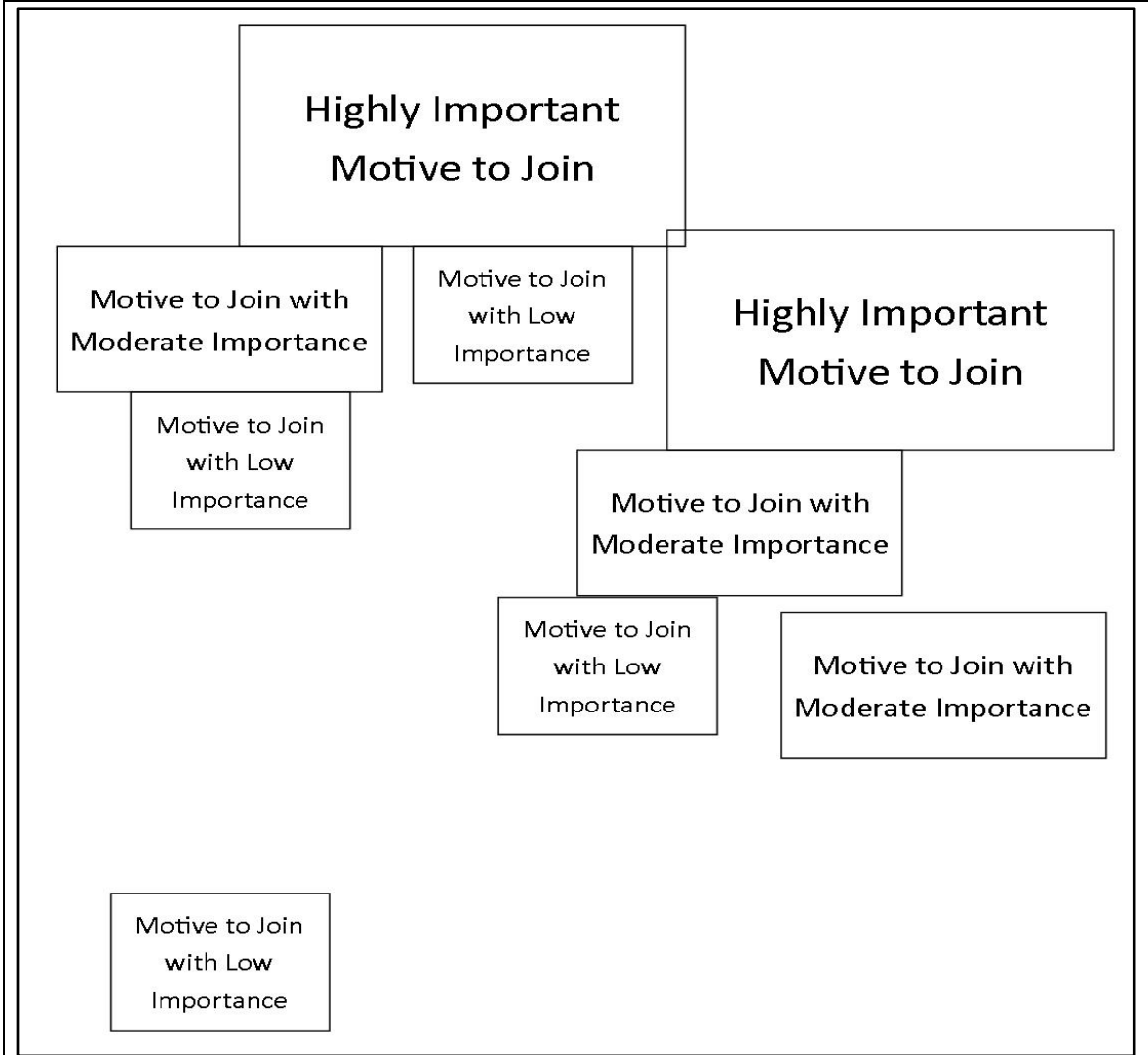
the inherent benefits of both the qualitative and quantitative approaches. The population studied was volunteer firefighters in the state of South Carolina. This proved to be the best feasible representative context aside from conducting a nationwide study.

This research investigated motives to join, expectations to continue serving, and satisfaction levels with each factor during the qualitative analysis using interviews and concept mapping exercises. The qualitative sample was generated using snowball sampling techniques. The results of the qualitative analysis informed construction of a survey instrument. This approach allowed for quantitative analysis of motives, expectation, satisfaction, and retention using weighted least squares regression models. This research constructed a combined service length measurement from the survey instrument responses regarding likelihood of remaining in service in one and five years as well as a continuous measurement of years of service remaining. The combined service length measurement served as the dependent variable during the regression modeling. I introduced control variables based on the extant literature and the qualitative results. The quantitative analysis also assessed those variables to test their significance on retention. The following three chapters will explicate the results of these analyses: Chapter 4 – Understanding Motives to Join, Chapter 5 – Understanding Expectations to Continue Serving, and Chapter 6 – Understanding Satisfaction and Retention.

**Figure 3.1: t0 Concept (Motive) Map Index Card Example**



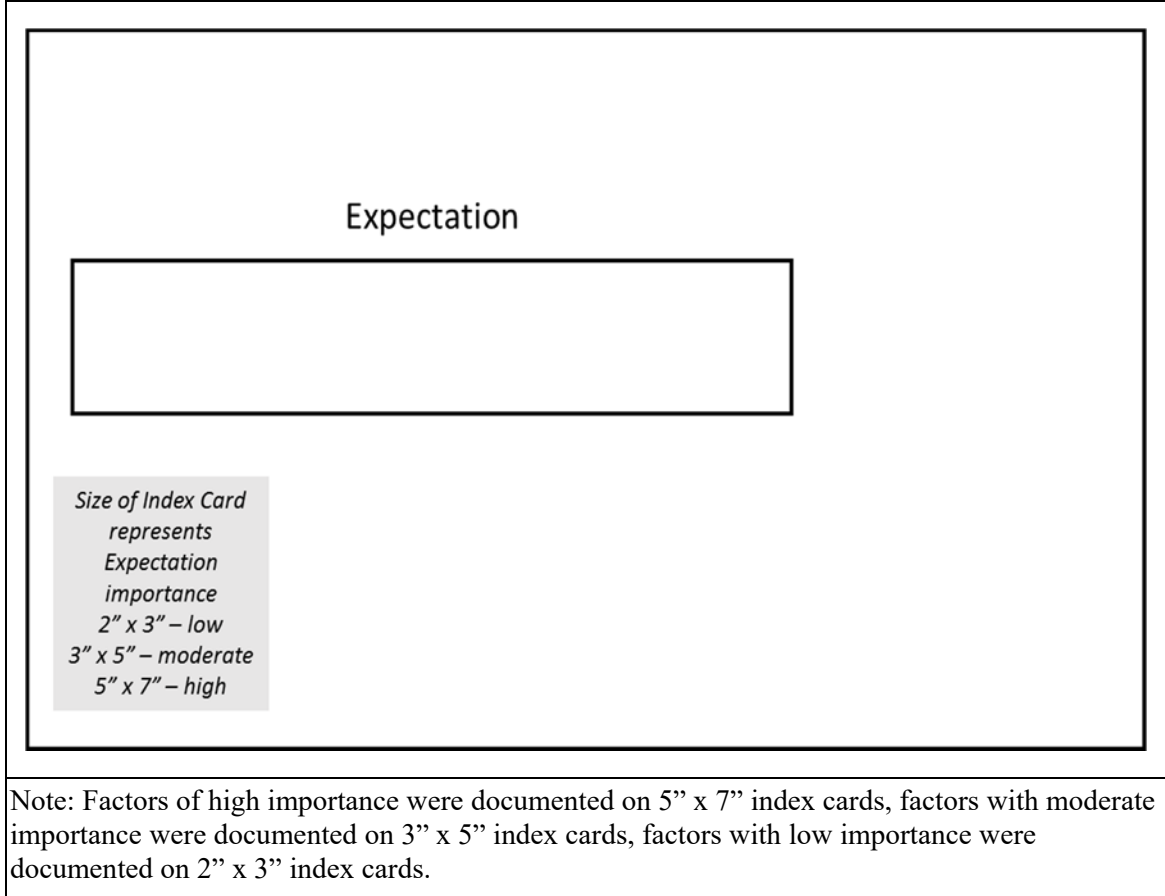
**Figure 3.2: t0 Concept (Motive) Map Example**



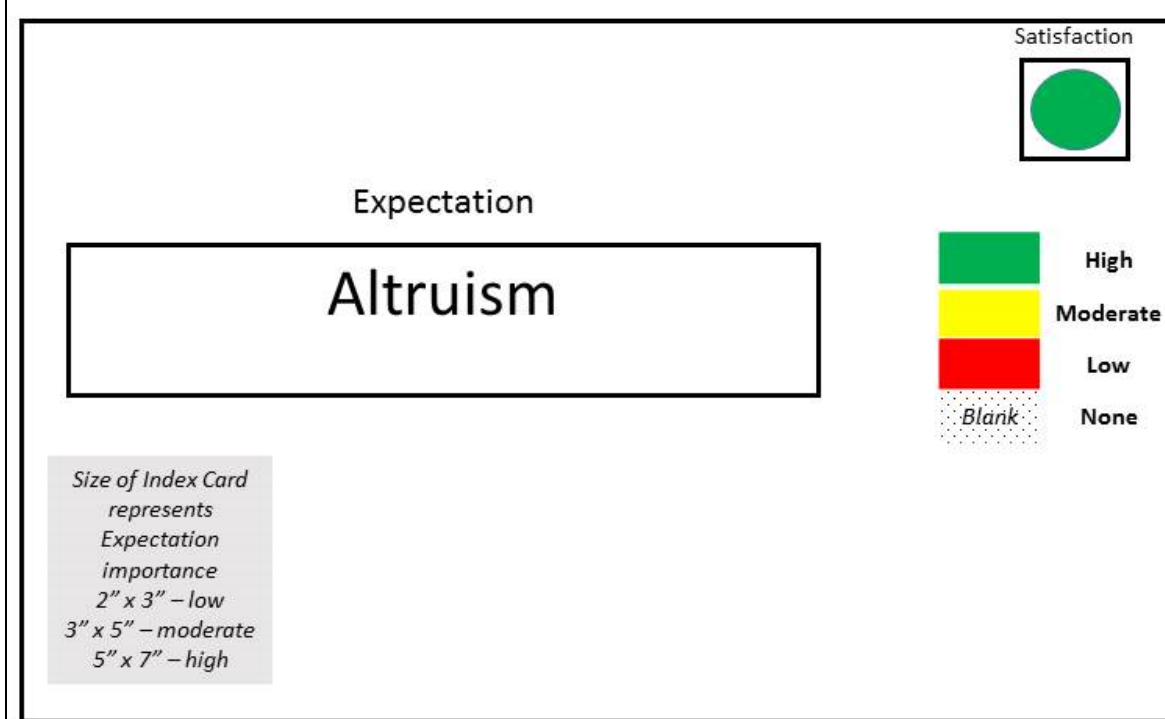
Note: Factors of high importance were documented on 5" x 7" index cards, factors with moderate importance were documented on 3" x 5" index cards, factors with low importance were documented on 2" x 3" index cards.



**Figure 3.3:  $t_n$  Concept (Expectation) Map Index Card Example**



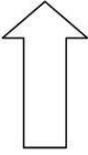
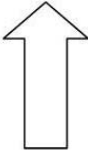
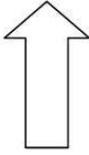
**Figure 3.4:  $t_n$  Concept (Expectation) Map with Reported Satisfaction Index Card Example**



Note: The size of index card indicates level of importance for the listed factor (Low - 2" x 3" index card; Moderate - 3" x 5" index card; High - 5" x 7" index card). The colored round sticker represents an assessment of respondent satisfaction with the factor (No satisfaction / NA - blank; Low - red; Moderate - yellow; High - green).

**Figure 3.5: Survey Instrument Example for Collection of Motives, Expectations, and Satisfaction**

## 1. A factor will be listed here

	Motive to Join	Expectation to Serve	Satisfaction with Service
Factor	<input type="text"/>	<input type="text"/>	<input type="text"/>
			
	Importance when you joined the volunteer fire service.	Importance today while serving as a volunteer firefighter	Current level of satisfaction with this factor

Subject	United States		South Carolina	
	Estimate	Percent	Estimate	Percent
<b>SEX AND AGE</b>				
Total population	309,138,711	309,138,711	4,630,351	4,630,351
Male	152,018,799	49.2%	2,251,898	48.6%
Female	157,119,912	50.8%	2,378,453	51.4%
Median age (years)	37.2		37.9	
18 years and over	235,158,852	76.1%	3,552,529	76.7%
21 years and over	221,400,201	71.6%	3,334,278	72.0%
62 years and over	50,281,162	16.3%	801,262	17.3%
65 years and over	40,671,441	13.2%	640,098	13.8%
18 years and over	235,158,852	235,158,852	3,552,529	3,552,529
Male	114,173,652	48.6%	1,703,151	47.9%
Female	120,985,200	51.4%	1,849,378	52.1%
65 years and over	40,671,441	40,671,441	640,098	640,098
Male	17,555,646	43.2%	276,965	43.3%
Female	23,115,795	56.8%	363,133	56.7%
<b>RACE</b>				
Total population	309,138,711	309,138,711	4,630,351	4,630,351
One race	300,842,420	97.3%	4,548,929	98.2%
Two or more races	8,296,291	2.7%	81,422	1.8%
One race	300,842,420	97.3%	4,548,929	98.2%
White	229,298,906	74.2%	3,108,466	67.1%
African American	38,825,848	12.6%	1,290,704	27.9%
Latino	50,545,275	16.4%	232,926	5.0%

Note: Source: 2013 Census information from [Census.gov](http://Census.gov)

**Table 3.2: Proportionate Stratified Sampling Frame**

Department Type	Population		Proportional Stratified Sample 100% Response Rate	
	<u>Frequency</u>	<u>Percentage</u>	<u>Frequency</u>	<u>Percentage</u>
Mostly Volunteer	5110	38%	375	38%
Wholly Volunteer	8244	62%	613	62%
TOTAL	13334	100%	988*	100%
			Maximum Actual Population Proportional Stratified Sample 60% Response Rate	
			<u>Frequency</u>	<u>Percentage</u>
Mostly Volunteer			625	38%
Wholly Volunteer			1021	62%
TOTAL			1646	100%

Note: \* Sample size needed for 95% Confidence level and +/- 3% confidence interval and population of 13,334

**Table 3.3: Proportionate Stratified Sampling Frame (Maximum Actual Numbers)**

Department Type	Maximum Actual Population Corrections from Participating Departments		Maximum Actual Population Proportional Stratified Sample 100% Response Rate	
	<u>Frequency</u>	<u>Percentage</u>	<u>Frequency</u>	<u>Percentage</u>
Mostly Volunteer	3200	38%	360	38%
Wholly Volunteer	5265	62%	588	62%
TOTAL	8465	100%	948*	100%
			Maximum Actual Population Proportional Stratified Sample 60% Response Rate	
			<u>Frequency</u>	<u>Percentage</u>
Mostly Volunteer			576	38%
Wholly Volunteer			941	62%
TOTAL			1517	100%
	Survey Respondents		Survey Respondents with Listwise Deletion	
	<u>Frequency</u>	<u>Percentage</u>	<u>Frequency</u>	<u>Percentage</u>
Mostly Volunteer	112	39%	111	51.2%
Wholly Volunteer	106	37%	106	48.8%
Did Not Answer	66	23%		
TOTAL	284	99%	217	100%

Note: \* Sample size needed for 95% Confidence level and +/- 3% confidence interval and population of 13,334. A total of 284 surveys were received with 39 respondents skipping all of the questions after Question 1 (Qualification question). Four respondents were disqualified after Question 1 indicating that they were not 18 years of age or older and a volunteer firefighter with a mostly or wholly volunteer fire department. Twenty three additional respondents skipped the question regarding their Department Type/Organizational Structure (Mostly Volunteer vs. Wholly Volunteer). One respondent answered all of the questions except the final (dependent variable) question. A listwise deletion was used which eliminated any respondents that did not answer all of the survey questions. This was necessary in order to conduct ordinary least squares regression analysis on retention.

**Table 3.4: Disaggregated Satisfaction Measurement from Disaggregated Responses**

<u>Factors</u>	<u>Individual Response Items</u>	<u>Disaggregated Measurement</u>
Values	Sense of civic responsibility	Mean of these 3 ordinal satisfaction responses
	Helping others	
	Serving as role model	
Understanding	Obtaining training	Mean of these 2 ordinal satisfaction responses
	Acquiring skills	
Career	Obtaining full-time employment	Mean of these 3 ordinal satisfaction responses
	Supplementing income	
	Networking with community and business leaders	
Social	Acquaintance	Mean of these 3 ordinal satisfaction responses
	Close friend or family member	
Protective	Fellowship	Mean of these 2 ordinal satisfaction responses
	Pay back the community	
	Having resources necessary to volunteer	
Enhancement	Excitement	Mean of these 3 ordinal satisfaction responses
	Being a member of valued public service	
	Sense of accomplishment	

Note: Ordinal satisfaction responses were: 4 – high satisfaction, 3 – moderate satisfaction, 2 – low satisfaction, 1 – no satisfaction

**Table 3.5: Direct Satisfaction Measurement Versus Motive Import**

<u>Response Item</u>	<u>Motive Import</u>	<u>Satisfaction</u>	<u>Weights</u>	<u>Calculation</u>	
Civic responsib.	1.00	1.00	0.00	0.00	
Helping others	1.00	2.00	0.33	0.33	
Role model	1.00	3.00	0.66	0.66	
Obtaining train.	1.00	4.00	1.00	1.00	
Acquiring skills	2.00	1.00	0.00	0.00	
Full-time employ.	2.00	2.00	0.33	0.66	
Supp. income	2.00	3.00	0.66	1.32	
Networking	2.00	4.00	1.00	2.00	
Acquaintance	3.00	1.00	0.00	0.00	
Friend or family	3.00	2.00	0.33	0.99	
Fellowship	3.00	3.00	0.66	1.98	
Pay back comm.	3.00	4.00	1.00	3.00	
Having resources	4.00	1.00	0.00	0.00	
Excitement	4.00	2.00	0.33	1.32	
Member pub. serv.	4.00	3.00	0.66	2.64	
Accomplishment	4.00	4.00	1.00	4.00	Satisfaction
	40.00 <sup>a</sup>	40.00		19.90 <sup>b</sup>	49.75

Note: This table represents example data. Weights were assigned based on ordinal satisfaction responses. A response of 4 = high satisfaction = weight of 1.00. A response of 3 = moderate satisfaction = weight of 0.66. A response of 2 = low satisfaction = weight of 0.33. A response of 1 = no satisfaction = weight of zero. The Direct Satisfaction Score was calculated by dividing the calculations column total (b) by the motive responses column total (a).



**Table 3.6: Relative Satisfaction Measurement Versus Motive Import**

<u>Motives</u>	<u>Motive Import</u>	<u>Satisfaction Level</u>	<u>Difference</u>	<u>Weight</u>	<u>Weight Affect</u>	<u>Calculation</u>
Civic responsib.	1.00	1.00	0.00	0.00	0.00	1.00
Helping others	1.00	2.00	1.00	0.33	0.33	1.33
Role model	1.00	3.00	2.00	0.67	0.67	1.67
Obtaining training	1.00	4.00	3.00	1.00	1.00	2.00
Acquiring skills	2.00	1.00	-1.00	-0.33	-0.67	1.33
Full-time employ.	2.00	2.00	0.00	0.00	0.00	2.00
Supp. income	2.00	3.00	1.00	0.33	0.67	2.67
Networking	2.00	4.00	2.00	0.67	1.33	3.33
Acquaintance	3.00	1.00	-2.00	-0.67	-2.00	1.00
Friend or family	3.00	2.00	-1.00	-0.33	-1.00	2.00
Fellowship	3.00	3.00	0.00	0.00	0.00	3.00
Pay back comm.	3.00	4.00	1.00	0.33	1.00	4.00
Having resources	4.00	1.00	-3.00	-1.00	-4.00	0.00
Excitement	4.00	2.00	-2.00	-0.67	-2.66	1.34
Member pub. serv.	4.00	3.00	-1.00	-0.33	-1.33	2.67
Accomplishment	4.00	4.00	0.00	0.00	0.00	4.00
	40.00 <sup>a</sup>					33.34 <sup>b</sup>

Relative Satisfaction      83.35

Note: This table represents example data. The relative satisfaction measurement represents respondent satisfaction relative to the change from individual ordinal motive responses to satisfaction responses. Weights were assigned based on the calculated difference between motive responses and satisfaction responses. A difference of 3 or -3 = weight of 1 and -1 respectively. A difference of 2 or -2 = weight of 0.67 and -0.67 respectively. A difference of 1 or -1 = weight of 0.33 and -0.33 respectively. A difference of zero = weight of zero. The Relative Satisfaction Score was calculated by dividing the calculations column total (b) by the motive responses column total (a). This quotient was then multiplied by 100.

**Table 3.7 – Direct Satisfaction Measurement Versus Expectation Import**

<u>Expectations</u>	<u>Expectation Import</u>	<u>Satisfaction</u>	<u>Weights</u>	<u>Calculations</u>	
Civic responsib.	1.00	1.00	0.00	0.00	
Helping others	1.00	2.00	0.33	0.33	
Role model	1.00	3.00	0.66	0.66	
Obtaining train.	1.00	4.00	1.00	1.00	
Acquiring skills	2.00	1.00	0.00	0.00	
Full-Time employ.	2.00	2.00	0.33	0.66	
Supp. income	2.00	3.00	0.66	1.32	
Networking	2.00	4.00	1.00	2.00	
Acquaintance	3.00	1.00	0.00	0.00	
Friend or family	3.00	2.00	0.33	0.99	
Fellowship	3.00	3.00	0.66	1.98	
Pay back comm.	3.00	4.00	1.00	3.00	
Having resources	4.00	1.00	0.00	0.00	
Excitement	4.00	2.00	0.33	1.32	
Member pub. serv.	4.00	3.00	0.66	2.64	
Accomplishment	4.00	4.00	1.00	4.00	Satisfaction
	40.00 <sup>a</sup>	40.00		19.90 <sup>b</sup>	49.75

Note: This table represents example data. Weights were assigned based on ordinal satisfaction responses. A response of 4 = high satisfaction = weight of 1.00. A response of 3 = moderate satisfaction = weight of 0.66. A response of 2 = low satisfaction = weight of 0.33. A response of 1 = no satisfaction = weight of zero. The Direct Satisfaction Score was calculated by dividing the calculations column total (b) by the expectation responses column total (a).

**Table 3.8 – Relative Satisfaction Measurement for Expectation Import**

<u>Expectations</u>	<u>Expectation</u> <u>Import</u>	<u>Satisfaction</u> <u>Level</u>	<u>Difference</u>	<u>Weight</u>	<u>Weight</u> <u>Affect</u>	<u>Calculation)</u>
Civic responsib.	1.00	1.00	0.00	0.00	0.00	1.00
Helping others	1.00	2.00	1.00	0.33	0.33	1.33
Role model	1.00	3.00	2.00	0.67	0.67	1.67
Obtaining training	1.00	4.00	3.00	1.00	1.00	2.00
Acquiring skills	2.00	1.00	-1.00	-0.33	-0.67	1.33
Full-time employ.	2.00	2.00	0.00	0.00	0.00	2.00
Supp. income	2.00	3.00	1.00	0.33	0.67	2.67
Networking	2.00	4.00	2.00	0.67	1.33	3.33
Acquaintance	3.00	1.00	-2.00	-0.67	-2.00	1.00
Friend or family	3.00	2.00	-1.00	-0.33	-1.00	2.00
Fellowship	3.00	3.00	0.00	0.00	0.00	3.00
Pay back comm.	3.00	4.00	1.00	0.33	1.00	4.00
Having resources	4.00	1.00	-3.00	-1.00	-4.00	0.00
Excitement	4.00	2.00	-2.00	-0.67	-2.66	1.34
Member pub. serv.	4.00	3.00	-1.00	-0.33	-1.33	2.67
Accomplishment	4.00	4.00	0.00	0.00	0.00	4.00
	40.00 <sup>a</sup>					33.34 <sup>b</sup>
Relative Satisfaction						83.35

Note: This table represents example data. This relative satisfaction measurement represents respondent satisfaction relative to the change from individual ordinal expectation responses to satisfaction responses. Weights were assigned based on the calculated difference between expectation responses and satisfaction responses. A difference of 3 or -3 = weight of 1 and -1 respectively. A difference of 2 or -2 = weight of 0.67 and -0.67 respectively. A difference of 1 or -1 = weight of 0.33 and -0.33 respectively. A difference of zero = weight of zero. The Relative Satisfaction Score was calculated by dividing the calculations column total (b) by the expectation responses column total (a). This quotient was then multiplied by 100.

**Table 3.9 – Combined Service Length Measurement Calculations**

<u>Response Question</u>	<u>Service Length</u>	<u>Response</u>	<u>Value</u>	<u>Weight</u>
1 year	1.00	3.00	0.67	0.20
5 years	5.00	3.00	3.33	1.00
Continuous	continuous	5.00	5.00	1.00
			9.00 <sup>a</sup>	2.20 <sup>b</sup>
Years of Service Remaining				4.09 <sup>c</sup>

Note: This table represents example data. Prior to initiating calculations, individual response data for the ordinal (1 year & 5 years) questions were coded as highly likely, moderately likely, somewhat likely, and not likely (4,3,2, and 1 respectively). In the first component, the value was calculated by subtracting one from the response (making a response of not likely equal to zero), dividing the difference by three (the adjusted maximum response), and multiplying the quotient by one (the service length). The weight was calculated by dividing the service length (one) by the continuous response. In the second component, the value was calculated by subtracting one from the response (making a response of not likely equal to zero), dividing the difference by three (the adjusted maximum response), and multiplying the quotient by five (the service length). The weight was calculated by dividing the service length (five) by the continuous response. In the third component, the response equaled the value and the weight remained one for each respondent. The combined service length measurement (c) was calculated by totaling the value calculations for each of the three retention questions (a) and dividing that sum by the sum of the weight calculations for each of the three retention questions (b). Combined Service Length Measurement (c) = sum of values (a) / sum of weights (b)

**Table 3.10 –Weighting Calculations for OLS**

<u>Factor</u>	<u>Type</u>	<u>% in Sample</u>	<u>% in Population</u>	<u>Weights</u>
Gender	Male	.825	.96	1.164
	Female	.175	.04	0.228
Race	White	.90	.93	1.033
	Minority	.10	.07	0.7
Department Type	Wholly Volunteer	.488	.71	1.455
	Mostly Volunteer	.512	.16	0.31
<u>Respondent</u>	<u>Gender Weight</u>	<u>Race Weight</u>	<u>Department Type Weight</u>	<u>Total Weight</u>
<i>Wholly Volunteer</i>				
White Male	1.164	1.033	1.455	1.75
Minority Male	1.164	0.7	1.455	1.19
White Female	0.228	1.033	1.455	0.34
Minority Female	0.228	0.7	1.455	0.23
<i>Mostly Volunteer</i>				
White Male	1.164	1.033	0.31	0.37
Minority Male	1.164	0.7	0.31	0.25
White Female	0.228	1.033	0.31	0.07
Minority Female	.228	0.7	0.31	0.05
Note: The total weight was applied to each respondent based on the respondent's gender, race, and institutional structure/department type membership.				

**Table 3.11 – Institutional Variables**

<u>Variable</u>	<u>Survey Question</u>	<u>Survey Responses</u>
Department Type	Do you belong to an all-volunteer or combination (mostly volunteer with some paid personnel) department?	1. All Volunteer (No paid firefighters) 2. Combination (Mostly volunteer with some paid)
Population Type	What is the population of the area your department (or station) serves?	1. Urban 2. Sub-urban 3. Rural

Note: Department Type was converted to a dichotomous variable and Population Type was converted to an ordinal variable.

**Table 3.12 – Respondent Characteristic Variables**

<u>Variable</u>	<u>Survey Question</u>	<u>Survey Responses</u>
Gender	What is your gender?	1. Female 2. Male
Race	Are you White, Black or African-American, American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific islander, or some other race?	1. White 2. Black or African-American 3. American Indian or Alaskan Native 4. Asian 5. Native Hawaiian or other Pacific Islander 6. From multiple races
Marriage	Are you married?	1. Yes 2. No
Children	Do you have any children?	1. Yes 2. No
Legacy / Family History	Does your family have a history in the fire service either professionally or volunteer?	1. Yes (I have family members that have served or are serving in the fire service). 2. No (I have no family members that have served or are serving in the fire service)
Continuous / Intermittent Service	Have you continuously or intermittently (start-stop-start again) served as a volunteer firefighter since you started?	1. Continuously (I have served since I joined) 2. Intermittently (I served, stopped, and began serving again)
Full-time Employment	Do you serve as a full-time employee of a fire department outside of your volunteer position?	1. Yes 2. No

Note: All variables were converted to dichotomous variables. Race was converted to a dichotomous variable as white or minority categories.

**Table 3.13 – Socialization, Risk, and Selective Benefits Variables**

<u>Variable</u>	<u>Survey Question</u>	<u>Survey Responses</u>
Other Civic Groups	Do you belong to any other civic groups (Church, Elks Lodge, Masons, etc.)? If so, please list the groups that are most important to you.	Open Ended Answer
Close Call Witness	Have you witnessed a firefighter experience a severe injury or close call – that almost resulted in severe injury?	1. Yes 2. No
Close Call Experience	Have you experienced a severe injury or close call – that almost resulted in a severe injury while serving?	1. Yes 2. No
Equipment	Do you have a warning light, radio or other equipment in your privately owned vehicle?	1. Yes 2. No
Equipment Purchase	Did the department provide the warning light, radio, or equipment in your privately owned vehicle?	1. Yes 2. No

Note: All variables were converted to dichotomous variables except for the Other Civic Groups variable. Other Civic Groups was converted into an interval variable that was calculated by using a whole number to represent the number of other civic groups to which the respondent belonged.



## CHAPTER IV

### UNDERSTANDING VOLUNTEER FIREFIGHTERS' MOTIVES TO JOIN

Part of the decline in the numbers of volunteer firefighters in the United States is the result of the failure of departments to retain their current members. Current numbers of volunteers are not sufficient to sustain the fire service for coming decades and improved strategies will be necessary both in terms of the recruitment and retention of volunteers to meet future fire protection obligations. Therefore, understanding firefighters' motives to join is a critical component of reversing the problem. Examining motives to join illustrates what attracts volunteers to the fire service. What made individuals become volunteer firefighters decades ago may not be what attracts them today.

#### **Qualitative Approach to Understanding Firefighters' Motives to Join**

Recall that the extant literature generally considers broad volunteer activities. Few studies examine the volunteer fire service specifically. Therefore, this research conducted interviews with a snowball sample with the respondents also participating in a concept mapping exercise. The first of these maps was the motive to join map, which represented time zero ( $t_0$ ) or the time at which the respondent joined the volunteer fire service.

#### *Sample Comparison*

The snowball sample used in the qualitative methods allowed for deep, rich analysis of a wide range of factors. The large-n random sample used with the subsequent quantitative methods provided a larger number of respondents, greater diversity, and utilized the preferred probability sampling method which enabled more generalizable conclusions. Table 4.1 demonstrates the

sample comparison. Remarkably, with the exception of the department type, the percentage of composition of each component in each sample is not vastly different. Married white males, over 40 years of age, with children and a family history of firefighting serving continuously for more than fifteen years represent the majority of both samples. The presence of this in both samples suggests that many of these factors may have an effect on volunteer firefighters and required closer analysis.

### *Individual Responses*

The snowball sample respondents were not bound by the six Clary, et al. (1998) factors that served as the framework for this research and discussed in the literature review. In lieu of using constraints, I utilized open-ended questions to comprise the widest breadth of motives that existed within the snowball sample. I documented these responses, identified in the interviews; using motive concept maps (see Appendix A) constructed by the snowball sample respondents. The individual responses from the 25 snowball sample respondents represented 22 different motives to join. These motives varied somewhat in importance and scope. Using the Clary, et al. (1998) factors as a guide, I was able to categorize many of the individual responses (see Table 4.2) and collapse the wide breadth of individual responses down to a manageable set of motives to join. The ease by which respondents answered interview questions without being limited to the six Clary, et al. (1998) factors represented an obstacle during analysis. Respondents had no limits in terms of response sets. Each respondent could indicate a specific motive to join that was important to him or her, which may or may not be related to a similar factor reported by another respondent. Therefore, the analysis required the translation and categorization of the responses from the snowball participants. The first step was to aggregate similar individual responses. Then it was necessary to evaluate the responses for consistency with the Clary, et al. (1998) framework and to classify the individual responses into the appropriate category. In some cases, translation and categorization was quite simple. For example, one respondent indicated that his father was a motive while another indicated their uncle was instrumental in their

decision to join the volunteer fire service. Both of these responses, father and uncle, represent the role of the *family* as a motive to join the service. As a result, I coded both of these responses as *family*.

The more challenging translations occurred when a respondent indicated that a motive to join was important but was related to a motive to join that was already established or that was included by another respondent, but as a different term. For example, one respondent indicated that *pride* was important as a motive to join. Despite the respondents using pride as a factor in their motive to join concept map, their interview revealed that they were proud to be a part of a valued public service. Nine other respondents reported being part of a valued public service as an important motive to join. Establishing a separation from these two responses was difficult.

The use of the Clary, et al. (1998) factors simplified this process. Individual responses were classified using the Clary, et al. (1998) framework which made similar responses part of the same Clary, et al. (1998) factor. Many of the individual responses could be categorized according to the Clary, et al. (1998) framework. I could not categorize some of the individual responses similarly.

#### *Values Motives*

Values motives as defined by Clary, et al. (1998) represented concern for others and altruistic motivations. *Helping others*<sup>4</sup>, *paying back the community*, *reciprocal service*, and *a sense of civic responsibility* were classified as values motives under the Clary, et al. (1998) framework. It is difficult to imagine that volunteer firefighters serve without altruistic motives in mind. Some respondents considered *paying back the community* a highly important motive to join.

Respondents described this payback as a value rather than a transaction. When questioned what it was that they received in order to feel as if they had to pay back the community, none named anything specific. Instead, most suggested that *paying back the community* was more of a gift

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<sup>4</sup> Individual responses are italicized throughout this chapter to indicate actual motives reported by research participants.

than it was a transaction. As respondent 52 described, his family instilled in him that it was his responsibility to give to the community in one form or another. For respondent 52, the best way to do this was to serve on the volunteer fire department. The nature of responsibility was yet another form of values motives.

One respondent reported a *sense of civic responsibility* as being highly important in lieu of *helping others* or *community payback*. Respondent seven was alone in choosing *civic responsibility* as having high importance as a motive to join. The influences on joining are not primarily from their friends or family, nor are they derived from the altruistic need to help others. One can conceptualize a *sense of civic responsibility* as a motive to join as a respondent joining due to feeling a community mandate. Like fellowship, it is probable that a volunteer firefighter cannot appreciate *civic responsibility* until after serving for some time. A potential volunteer may not bring *civic responsibility* with them at the time they join the volunteer fire service. The responsibility is not theirs until after they become an active contributing member of the organization. Until then, there is likely little to no importance among volunteer firefighters. Although it is of low importance as a motive to join according to the qualitative results, it likely possesses significant importance as an expectation to continue serving.

The qualitative methods also discovered a concept of *reciprocal service* as a motive to join. One snowball respondent explained this motive as helping others during their time of need in hopes that they would one day help the respondent should they require it. Manatschal and Freitag (2014) suggested that reciprocal service might include an individual who was helped in the past that wants to reciprocate now or in the future. This parallels the payback motive previously discussed. Because the snowball respondent explained *reciprocal service* as serving first and being served as second, it was separated into a distinct motive to join. One could consider *reciprocal service* as a protective motive. Because the respondent provides the service first in hopes of later return and not out of guilt relief or return for previous benefit, reciprocal service is more likely a values motive such as helping others.

Across *helping others*, *payback to the community*, and a *sense of civic responsibility*, values motives were highly important motives to join according to the snowball sample. Figure 4.1 demonstrates a respondent's concept map for values motives as a primary influence. In this motive map, *helping others*, a values motive, is a highly important to join. In the right column of the concept map, *helping others* relates to public service, which is associated with being a member of a valued public service, an enhancement motive that is also highly important according to respondent eight<sup>5</sup>. *Self-improvement*, which is also highly important and is also an enhancement motive, is present in the left column. *Self-improvement* is a parent to *learning new skills*, an understanding motive that is moderately important according to respondent eight. This suggests that for this respondent, *learning new skills* is more important to improvement of self in lieu of organizational improvement. Finally, *friends and family in service* is moderately important but is clearly the motive to join with the lowest importance in this concept map. For respondent eight, recruiting within the insular group of family and friends would not be sufficient. Instead, recruitment efforts must recognize the importance of values motives, followed by enhancement motives, and finally understanding motives.

#### *Enhancement Motives*

Next, I examined potentially self-serving motives. Enhancement factors were defined by Clary, et al. (1998) as increasing self-esteem, confidence, and/or self-improvement. *Improving oneself*, *excitement*, *helping the respondent to mature faster*, *being part of a valued public service*, and *pride* were all individual responses classified into the Clary, et al. (1998) enhancement motive. The aforementioned difficulties in aggregating individual responses were alleviated by this classification. A prime example is the respondent who indicated that *pride* was a highly important motive to join and the interview revealed that the respondent was proud to be part of a

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<sup>5</sup> Public service could possess dual meanings. Serving the public could be both values and enhancement motives to join. From the qualitative interviews, serving the public alone relates to helping others (a values motive). Being a member of a public service appeared as an enhancement motive given that the membership was concerned with the individual's membership, thus enhancing the individual.

valued public service. While the appropriate individual response to be used in the motive map was unclear, *pride* versus *being part of a valued public service*, I classified both of these motives as enhancement factors under the Clary, et al. (1998) framework. This eliminated the confusion over which individual response was appropriate by providing an overall all-encompassing factor that addressed each motive as outlined by the Clary, et al. (1998) framework.

*Excitement* was frequently reported with high importance. It is also possible that the importance of this motive was underreported.

As previously discussed, one of the difficulties of this research approach is that it requires respondents to reach back into their past and attempt to remember what motivated them to join the volunteer fire service years ago. The fire service often frowns on those that are motivated by excitement. Whether a career or volunteer firefighter, the fire service culture demands that its members remain calm and function efficiently during emergencies. Although *excitement* while serving has a certain negative association, it is possible and even likely that a volunteer unfamiliar with the fire service culture would truly be motivated to join because of the exciting nature of the work. However, an existing volunteer understands the stigma associated with *excitement* and may report that it was of lower importance within their motives to join because of this. Because the qualitative methods utilized face-to-face interviews and concept mapping exercises, it is likely that this motive to join did not receive the higher importance level it deserves. The survey instrument responses will likely be more reliable due to its anonymous nature.

While *helping others* was a foundation of all volunteer opportunities in the existing literature, it does not mention enhancement motives such as *excitement* overall. In other volunteer opportunities, *excitement* is likely not a motive to join. For those that are volunteering at the local library or soup kitchen, *excitement* is likely not a motivation.

A few snowball respondents reported that being a member of the local fire department was an important motive to join. As they described, there was a certain personal value associated with being a part of such a cherished and noble service. Given that the bulk of the snowball sample

did not report this motive, it is possible that this motive, like a *sense of civic responsibility*, has a progressive importance. Again, volunteer firefighters likely do not appreciate the importance of *being part of a valued public service* until after serving for a time.

Five snowball respondents reported *self-improvement* as having some level of importance. Flynn and Black (2011) suggested that the dichotomization of altruism and self-interest is largely incorrect and it is possible that an individual can be interested in both helping others and improving themselves. Although *helping others* among the snowball sample respondents was highly important as a motive to join, the majority of the snowball sample did not report high importance associated with *self-improvement* as a motive to join, though there were occurrences. Consider the examination of values motives and Figure 4.1. Respondent eight reported high importance for *self-improvement*, *public service* and *helping others*. While *self-improvement* relates to enhancement motives and *helping others* relates to values motives, *public service* connects the two by potentially serving as both values and enhancement motives. As previously described, serving the public is a values motive but being a member of a public service is an enhancement motive, as it relates to the individual's membership and improvement. Although the quantitative results will ultimately measure the importance of self-improvement, it is understandable that due to the self-sacrifice of volunteer firefighters, self-improvement would be of lower importance than helping others as a motive to join.

Only one respondent reported *pride* as a highly important motive to join. This *pride* is likely a parallel motive to *being part of a valued public service*, as some volunteers may experience pride by being part of their organization. Volunteers also described feelings of pride and accomplishment in *helping others*. This ties the feeling of *pride* to not just other enhancement motives, but to values motives as well. Respondent 17 indicated that serving as a volunteer firefighter helped him to *mature faster*. This response was from a younger volunteer firefighter and is presumably not applicable to older volunteer firefighters. None of the other snowball respondents indicated that volunteering in order to *mature faster* was of any importance.

Nonetheless, this motive is associated with *self-improvement*. Being charged with the protection of life and property at a young age helped respondent 17 *mature faster*, therefore causing *self-improvement* for the respondent.

Among the snowball sample, enhancement motives were highly to moderately important.

*Excitement*, *being part of a valued public service*, and *self-improvement* were reported as the highest of enhancement motives. Only one respondent respectively reported *pride* and helping a respondent *mature faster* as possessing any level of importance. Figure 4.2 outlines a respondent that emphasizes the importance of enhancement motives.

Figure 4.2 illustrates enhancement motives to join. *Excitement*, an enhancement motive, is clearly one of the most important motives to join for respondent 20. This respondent's father, a social motive, was also highly important as a motive to join. From left to right in the concept map, this social motive may have been more important. *Making a difference/helping others*, a values motive, was also highly important. *Learning new skills* was of low importance for respondent 20. Although the social motive was highly important, the quantitative analysis revealed that many snowball respondents might have overestimated its importance to the entire population. In the absence of the social motive, the enhancement motive, excitement, becomes most important for respondent 20. Many outside the fire service observe firefighters racing to or operating at emergencies and find the nature of the work incredibly exciting. Along those lines, as a motive to join, enhancement motives such as *excitement* are highly important influences on potential volunteer firefighters. While values motives are of fundamental importance while serving, recruitment efforts must consider other motives, such as enhancement motives, to attract new members.

Excitement clearly separates the volunteer fire service from other volunteer opportunities. This suggests that the importance of *excitement* could perhaps be higher among the population.



### *Understanding Motives*

Understanding motives, as defined by Clary, et al. (1998), included the opportunity to learn, practice and apply skills and abilities. The individual responses included in this factor were *acquiring/applying new skills*, and *obtaining training*. Although a few respondents submitted understanding motives as important without specific questioning, I often had to query the majority of the snowball sample participants for a response regarding understanding motives, suggesting it was of tertiary interest amongst initial motives to join.

Snowball respondents reported two motives to join that were associated with the Clary, et al. (1998) understanding motives. They were *acquiring and applying new skills*, and *obtaining training*. *Acquiring and applying new skills* was important to several snowball respondents. It is likely that the understanding motive more related to *self-improvement* is *acquiring and applying new skills*. The skills obtained in the fire service have value to tasks outside of the fire service. For example, a volunteer firefighter in a small community may learn how to perform preventative maintenance on the apparatus. These skills may also benefit them in their private lives as they could possibly perform preventative maintenance on their own vehicles instead of paying to have them serviced.

It is more likely that *obtaining training* relates to *helping others*. The training obtained in the fire service increases the ways by which its members can help others. Many respondents described in their interviews that they did not realize the importance of training until after they joined. This explains why *obtaining training* was even less important than *acquiring/applying new skills* among the snowball sample. The large majority of the snowball sample did not report any importance associated with *obtaining training*.

Overall, the snowball sample revealed that understanding motives were moderately important to joining. The two reported motives suggest a dichotomous nature of these motives.

*Acquiring/applying new skills* tends to favor *self-improvement*, while *obtaining training* tends to favor the organization and its ability to maintain members trained to *help others*. As discussed,

altruism and self-interest are not necessarily divergent; therefore, it is possible that understanding motives can do both. The importance of *acquiring skills* far outweighs the importance of *obtaining training* according to the snowball sample. However, several of the respondents revealed that potential volunteers could not fully appreciate the significance of *obtaining training* prior to joining. Figure 4.3 shows a sample concept map from a respondent that places emphasis on understanding motives to join.

Figure 4.3 provides an example of the overall qualitative data. No snowball respondents indicated that understanding motives were the primary influence on joining the volunteer fire service. In fact, as Figure 4.3 illustrates, even respondent 18, that considered an understanding motive highly important, reported more important motives to join. Respondent 18 suggests that social motives were most important to their joining as represented by friends/family in service. Additionally, an enhancement motive, *excitement*, was also more important than understanding motives. Despite respondent 18 being one of the few respondents that considered understanding motives highly important at the joining stage ( $t_0$ ), there are clearly other important motives at play as evident in the respondent's motive map. This is applicable to all of the qualitative results with understanding responses.

#### *Social Motives*

Clary, et al. (1998) defined these social motives as an individual's pursuit of group membership and solidarity or influences by the individual's surrounding social system. I classified *friends/family in the fire service* and *family tradition of volunteering in non-fire department opportunities* as social motives to join. Only one respondent reported the social influences from *non-fire department volunteer opportunities* as important. *Fellowship, brotherhood, a sense of belonging*, and a *sense of community involvement* were all included in social motives to join. Social factors are an important influence on a potential volunteer's decision to join the fire service. Many people seek volunteer opportunities because they have friends or family members that are members of a volunteer organization. As Clary, et al. (1998) suggest, perhaps a potential

volunteer is seeking fellowship or desires to eliminate social alienation or isolation by joining a volunteer organization. Membership in the volunteer fire service is like membership in a club. As in any club membership, there are a number of social benefits that can be attractive to potential members and therefore serve as highly important motives to join.

Across the snowball sample, *friends and family currently serving* as volunteer firefighters was a highly important motive to join. Although a conclusion cannot be drawn from this small, purposive sample, this suggests that volunteer firefighter recruitment primarily occurs within an insular social structure. During the quantitative analysis, social motives required close examination. Only one snowball respondent reported that a *family tradition of volunteering in opportunities outside of the fire service* was a highly important motive to join. Because the social pressure to volunteer is similar for this respondent as it is for those with friends and family in the volunteer fire service, I combined the *family tradition of volunteering in non-fire department opportunities* motive with the *friends and family in service* motive.

Overall, it is apparent that connections to family and friends are likely powerful social motives to join among the snowball sample respondents. If this is accurate, it suggests that recruitment within the volunteer fire service has an insular nature overall. The social aspects that are highly important to recruitment also limit the pool of available volunteers. The fire service should not be limited to recruiting from friends and families of its current members. Instead, the fire service must find a way to break out of this limited pool of volunteers and attract outside members that have different motives to join.

Few snowball respondents reported *fellowship* as being important. The lack of overall emphasis on this motive is possibly related to temporal context. At the time a volunteer joins the fire service ( $t_0$ ), the candidate is an outsider and cannot fully understand the *fellowship*, “brotherhood” as many snowball respondents described it, until well after they join. *Fellowship*, therefore, is likely to be a more powerful expectation to continue serving than it is a motive to join.

Mostyn (1983) and Wardell, Lishman, and Whalley (2000) suggested that the social motives to volunteer include therapeutic motivations that combat isolation, reduce depression, and lessen loneliness and emotional deprivation. Only two snowball sample respondents reported a *sense of belonging* was important as a motive to join. Their responses suggested that a *sense of belonging* was of low and moderate importance.

Given the strong influence of family and friends in service as a motive to join, the lowered importance associated with a *sense of belonging* is not surprising. The existing insular group of family and friends creates a *sense of belonging* a priori. Potential volunteers do not consider a *sense of belonging* important. Plainly, candidates who join the volunteer fire service because their family or friends are serving, already belong to that group of friends or family. Therefore, seeking a *sense of belonging* is not important to that group. As previously stated, this is an imperative for fire service leaders to improve recruitment by promoting motives outside of this insular group of family and friends. Providing a sense of belonging to potential volunteers outside of this insular group would be more important for recruitment.

Snowball respondent number 45 was the only snowball respondent that reported a family tradition of volunteering in a non-fire department related opportunity was consequential. Respondent 45 reported this motive as highly important. This motive directly relates to family serving in the fire service. As Bekkers (2007) described using social learning theory, parental volunteerism will resonate with their children and resembles an action or deed driven pedagogical process. This suggests that children will likely volunteer akin to their parents. Perhaps respondent 45's family did not have an opportunity to volunteer in the fire service. The nature of the volunteer work may not be the most compelling factor when tradition is concerned. The nature of self-sacrificial service and not the type of service resonates among families. However, *family in service* is important when prospective volunteers are able to join their families in a particular type of service, and that particular type of service is available. In that case, a candidate is less likely to volunteer at the soup kitchen in response to their family volunteering in the fire

service. When considering tradition of volunteering described by respondent 45, there must be another motive acting as a motive to join the volunteer fire service. When a candidate's family does not have a history of volunteering in the fire service and there are multiple volunteer opportunities available, another motive must differentiate the fire service opportunities from other volunteer opportunities. In the absence of these differentiating motives, the prospective volunteer will likely choose to engage in any available volunteer activity. For respondent 45, having *friends currently serving* and *excitement* were differentiating motives to join the volunteer fire service instead of pursuing other volunteer opportunities.

The nature of the snowball sample somewhat limits the effective value of social factors. Because many of the snowball respondents are members of the same department serving beside family members, the importance of social motives to join may be biased in some way. These respondents may overemphasize the importance of *family/friends in service* and underemphasize the importance of *fellowship* and a *sense of belonging* as motives to join. Respondents with a family tradition in the fire service (legacy firefighters) are likely to volunteer in the fire service. Non-legacy volunteers are more likely to seek *fellowship* and a *sense of belonging* by volunteering in the fire service. Non-legacy firefighters will obviously find less importance associated with *family in the fire service*. Although *friends/family in service* was one of the most important motives to join, the fire service simply cannot continue to rely on only recruiting friends and family of its current members. Imagine the number of physically capable candidates that do not live in the same community as their families. Recruitment based on family in service would pass over these candidates just because of this. Instead, the fire service must find a way to recruit outside of this insular group to build its rosters. This may be as simple as seeking those who find value in the most important motive to join from the perspective of the service. That is found within Clary, et al.'s (1998) values motives.

Individual responses revealed that *friends and family serving* in the volunteer fire service, a social factor, was highly important as a motive to join. It is important to re-emphasize that the snowball

sample consisted of groups of respondents from several volunteer departments. As a result, several of the respondents were family members, meaning that the emphasis on friends and family may have been overemphasized. The overemphasis of social motives, as defined by Clary, et al. (1998), will be re-examined in the quantitative results to verify the validity of the qualitative results. Figure 4.4 outlines an example motive concept map for a respondent that placed emphasis on social motives.

It illustrates a respondent that clearly places emphasis on *family in service* as demonstrated by the large index card signifying high importance. *Excitement* and *being part of a valued public service*, enhancement motives, are also both highly important. This respondent indicated that understanding motives are of low importance, as represented by the small index card for their individual response of *learning new skills*. Social factors were a highly important, frequently repeated motive to join among a majority of the snowball sample. In the case of respondent 19's motives to join, outlined in Figure 4.4, enhancement motives would act as useful appeals for recruitment. If social motives were absent or nonexistent for potential recruits, then perhaps, stronger marketing on enhancement is one means of breaking outside of the insular network of existing volunteers.

#### *Protective Motives*

Protective motives were described by Clary, et al. (1998) as those dealing with guilt relief. This is a unique motive to volunteer and exists within the individual's sympathetic tendencies and the guilt that comes with being more fortunate than others. The individual response that was classified into this Clary, et al. (1998) motive was *having resources others do not*. I had to query all of the snowball respondents regarding this motive to join as none self-indicated it had any importance in absence of a prompt.

The Clary, et al. (1998) protective motive was conceptualized by examining respondents who joined because they had resources that others do not have. No snowball respondents voluntarily reported that *having more resources than others* was of any importance as a motive to join. To

insure that protective motives were evaluated, all snowball respondents were queried regarding *having resources that others do not*. After being queried, only three respondents reported that *having resources others do not* possessed any importance as a motive to join. One reported high importance, one reported moderate importance, and one reported low importance. After being queried, the remaining respondents indicated that *having resources others do not* was of no importance as a motive to join.

Although the comparison of a potential volunteer's resources to others appears to be relatively unimportant according to the snowball sample, the resources themselves may be an important consideration alone. Without sufficient resources such as available time, financial security, means of transportation, etc. volunteering in the fire service is difficult to impossible. The resources are enabling for the volunteer as opposed to a source of guilt as described by Clary, et al. (1998). Therefore, a volunteer need only evaluate their own set of resources when determining their influence on joining the volunteer fire service. A comparison of their own resources to others is not necessary as guilt relief is likely not an important motive to join. Figure 4.5 illustrates respondent 30's motive map, which demonstrates an occurrence of resource comparison to others.

As Figure 4.5 outlines, respondent 30 considered a feeling of being more privileged than others in the community as a highly important motive to join. The map, though, shows that *excitement*, an enhancement motive was most important when joining. This was followed by *helping fellow members of the community*, a values motive. Protective motives, like understanding motives, were a secondary concern behind values and enhancement motives. Interestingly, respondent 30 indicates that a mother and grandmother serving on the ladies auxiliary were moderately important motives to join. This is another example of the influence of social motives. *Obtaining training* (i.e., an understanding motive) and *obtaining full-time employment* (i.e., a career motive) were of low importance for respondent 30. While this concept map represents an individual response from each of the six Clary, et al. (1998) factors, it is clear that the protective motive is

not the most important motive to join according to this respondent. Despite this, it is clearly in play and deserves some attention.

### *Career Motives*

Clary, et al. (1998) defined career motives as enhancing or improving the individual's career or job prospects. The career motives included only two individual responses, *seeking full-time employment* and *money*. Like the protective motives above, I had to query respondents regarding career factors too because they did not readily emerge in the mapping exercise. Very few suggested that career factors were of any importance voluntarily and only two respondents reported them as having moderate or high importance when prompted. *Money*, as a motive to join, had no importance among all respondents.

Only a few snowball respondents reported any level of importance when considering *seeking full-time employment* in the fire service as a motive to join. The majority of the snowball sample indicated that *seeking full-time employment* was of no importance as a motive to join the volunteer fire service, making it a truly volunteer linkage for most of the respondents. Despite the lack of emphasis on career motives for recruitment purposes, career motives are likely important to a significant minority of the South Carolina volunteer firefighter population. It is probable that *acquiring/applying new skills* and *obtaining training*, the two understanding motives, are important to those who consider career motives to join important. The skills, training and experience that a volunteer firefighter can obtain improve their employability in full-time positions in the fire service.

I queried all snowball respondents regarding the importance of money as a motive to join. None reported *money* as having any importance as a motive to join. This was widely discussed throughout the qualitative interviews and was largely ignored by respondents at the time they joined. As many respondents stated, volunteer firefighters do not participate for money. If they did, they would not be volunteer firefighters. As a motive to join, career factors appear to be



largely tied to *obtaining full-time employment in the fire service*. Figure 4.6 illustrates respondent 29's motive concept map, which considers career motives highly important.

This motive map includes meeting friends as a moderately important individual response.

Although this is tied to the other social motives, it is not associated with *friends/family in service*

and more likely associated with respondent 29 seeking *fellowship*. The three highly important

motives were *helping others*, *obtaining training*, and *future full-time employment*. *Helping*

*others*, a values motive, appears at the top of the map, as it does in many of the motive maps.

*Obtaining training* is an understanding motive that could be associated with *increasing*

*employability*, which is a career motive. In this map, the understanding motive is tied to *future*

*full-time employment*, the career motive, by way of *excitement* and *using time wisely/being*

*productive*. Both of these are enhancement motives and are moderately important according to

respondent 29. This is where this respondent differs from the others. Despite the shared

importance of values motives, respondent 29 clearly has an interest in *obtaining training* through

self-investment in an effort to gain *future full-time employment*. Highly important career motives

were rare among the snowball sample, but Figure 4.6 provides an excellent example of such an

occurrence.

#### *Miscellaneous Motives*

As previously discussed, there were other motives to join that snowball respondents reported.

Where only one respondent reported a motive to join, and it could not be easily classified into the

Clary, et al. (1998) framework, it was labeled as a miscellaneous motive to join. One respondent

indicated that the Sofa Super Store fire was highly important as a motive to join. The Sofa Super

Store Fire occurred on June 18, 2007 in Charleston, South Carolina and killed nine City of

Charleston firefighters. This motive is of an ad hoc nature and probably is related to the

systematic values motives by way of the respondent engaging in altruistic service. The response

may also relate to enhancement motives, as the respondent may have been attracted to *being part*

*of a valued public service, or pride* by serving in such a time-honored profession, which was demonstrated by the Charleston 9 firefighters.

Another respondent indicated that his *fascination with the fire service* was highly important as a motive to join. When questioned regarding what particular aspect was fascinating, it appeared that this motive paralleled that of *excitement*. The respondent replied that everything about the fire service was fascinating. This appeared to be an emotional response in lieu of a logical weighting of utility among factors as demonstrated in the rational economic model described in Chapter 2. This response is likely associated with enhancement motives, specifically *excitement*. The emotional value of finding everything about the fire service fascinating parallels the emotional value of *excitement*, which was the enhancement motive with the highest importance among the snowball sample.

One respondent reported that *using time wisely and being productive* was a moderately important motive to join the fire service. The respondent, a college student, offered that having an opportunity to help other people experiencing emergencies seemed much more productive than sitting around his dorm room playing video games. The remainder of the snowball sample likely does not suffer from the same overabundance of time that this particular respondent encountered. While all of the respondents likely agree that volunteering in the fire service is a productive opportunity, the lack of any other respondent reporting importance for this motive to join suggests that they are not joining because they are simply attempting to find a way to spend their time wisely.

One respondent reported *working with others toward a common goal* as being moderately important as a motive to join. This motive is difficult to classify. While working with others suggests that social influences could be present in this motive, it is also working toward a common goal, which suggests the motive may belong among values motives. However, the common goal in the fire service is to save lives and protect property. This may be a value among firefighters, but achieving this goal alongside others likely results in personal satisfaction or a

feeling of accomplishment. The Clary, et al. (1998) framework has established this as an enhancement motive. *Working with others toward a common goal* has no clear classification within the framework. Therefore, it was included among the miscellaneous motives.

### **Qualitative Categories of Joiners**

After examining the qualitative results and identifying the forms that Clary, et al. (1998) factors take in motives to join the volunteer fire service, I reviewed all of the concept maps to see if different categories of joiners emerged within the analysis. This analysis involved searching for prominent motives to join or pairs of motives. How these motives combine may create a distinct typology. For example, a distinct pair of motives, such as the social and values categories, might drive a cadre of family firefighters to volunteer. I systematically identified four categories of joiners. The individual responses allowed me to select the specific motive with high or moderate importance while use of the Clary, et al. (1998) classification enabled me to avoid repeating individual responses from the same aggregated Clary, et al. (1998) factor.

#### *Family Firefighter*

The first of these categories of joiners was the family firefighter, which emphasized the social and values motive categories. These respondents place a high emphasis on *family and friends in service*. Additionally, *fellowship/ brotherhood* and values motives were important to these respondents. Family firefighters typically are legacy volunteers, with members of their family previously or currently serving as volunteer firefighters. Their motive to join was the assumption that their service was required as a matter of their family's tradition or a member of their family, who was already serving in the fire service, asked them to serve. Although *friends and family in service* and *fellowship/brotherhood*, all social motives, are very important to these types of volunteers, social motives only accent the underlying values motives. Where family is influencing volunteers to join, the influence is likely due to an underlying values motive, such as *civic responsibility* or *helping others*. Figure 4.7 illustrates the motive to join (t<sub>0</sub>) concept map for family firefighters.

This respondent clearly places emphasis on the importance of *friends/family in service* as a motive to join, which the large (highly important) index card indicates. *Helping others*, a values motive, is also highly important to respondent 22. Social and values motives are representative of the family firefighter archetype. *Working with others toward a common goal*, which was unclassified and could be related to both social and values motives, was moderately important to respondent 22. *Excitement*, an enhancement motive, was also moderately important when joining according to respondent 22. The presence of this highly important values motive connected to the highly important social motives, helps to establish that this respondent is a family firefighter. Overall, this respondent, like all family firefighters, have consider social motives important. However, the social influences are dependent upon the underlying values motives. Plainly, family may have brought respondent 22 to join, but it was in order to help others. This is demonstrative of the social and values motives pairing that is present among family firefighters.

#### *Altruist*

The second category of joiner identified was the altruist. These respondents joined the volunteer fire service primarily to help others. While *helping others* may also be a motivation of members of other categories of joiners, it is the nearly exclusive motivation of altruists. They may have experienced or witnessed a fire or other emergency, seen firefighters who aided those in need, and developed a desire to help others from that experience. Unlike family firefighters, altruists do not develop this sense of importance regarding values motives primarily because of social influences. The need to help others may be present in other generic volunteer opportunities, but the nature of the unpredictable and ever-increasing time commitments makes the volunteer fire service much different. Alternatively, it is also possible that altruists will improve themselves by gaining skills, training and experience. In either case, these are enhancement motives that are highly important to altruists. The motive to join ( $t_0$ ) concept map for altruists will show *helping others* as the most important motive to join (see Figure 4.8).

Respondent eight places emphasis on the importance helping others, which is tied to *being a member of a valued public service*, an enhancement motive. *Self-improvement* is also both an enhancement motive and highly important. *Learning new skills* is moderately important to respondent eight. Respondent eight associates *learning new skills* with *self-improvement* in lieu of *helping others*. Values and enhancement motives are most important to this respondent and demonstrate the convergence of altruism and self-interest as described by Rogers (1951) and Maslow (1950). While social influences are present as illustrated by the presence of the *friends and family in fire service* card as a moderately important motive to join in the concept map, it is the least important motive according to respondent eight.

#### *Excitement/Risk Junkies*

Excitement/risk junkies represent the third category of joiners and primarily utilize enhancement motives, followed by values motives to join the volunteer fire service. This is yet another example of how volunteer opportunities in the fire service diverge from other generic volunteer opportunities. The volunteer fire service offers work that is more exciting than most other volunteer opportunities. Excitement/risk junkies are motivated to join the volunteer fire service because the inherent danger and risks associated with response and operations meets a need to experience exciting or risk filled activities. Those in this category of joiners are likely to be more youthful and inexperienced, may have previously served in a risky occupation, or otherwise have a lower level of risk aversion. As a result, they place a higher level of importance on *excitement* than others do, which makes other motives to join less important. Figure 4.9 outlines an example of the excitement/risk junkies' motive to join ( $t_0$ ) concept maps.

Note the simplicity of respondent 21's motive map. *Excitement*, an enhancement motive, possesses the highest importance. *Fascination with the fire service* was also a highly important motive to join. This motive was classified as miscellaneous in Table 4.2. *Fascination with the fire service* is most likely associated with enhancement motives such as *excitement*. During the interview, respondent 21 reported that everything about the fire service was fascinating, and not

one specific area over another. This feeling of fascination is an emotional response that is similar to the feeling of *excitement*. Both of these enhancement motives to join are highly important to respondent 21. The only other motive listed is *helping others*, a values motive, that is of low importance. *Helping others* is an underlying motive among most volunteer firefighters, but for excitement/risk junkies, the work must be exciting. This is why respondent 21 joined the volunteer fire service in lieu of the local library or soup kitchen, which offers opportunities to help others with far less excitement. The motives at play for excitement/risk junkies are primarily enhancement and values motives.

### *Learners*

The fourth and final category of joiner is the learner. Learners consider understanding and enhancement factors as the pairs of motives to join with the highest importance. These individuals are attracted to the volunteer fire service as a matter of learning the various aspects of emergency response and therefore place emphasis on the importance of *acquiring skills* and *obtaining training*. These skills and this training serve to both improve the individual's level of knowledge, skills, and abilities (understanding) and improve the ways by which the individual can perform (enhancement). In a full-service, all-hazards department, the number of response aspects are numerous and include fire suppression, fire inspections, fire investigation, hydraulics and pump operations, hazardous materials response, auto extrication, high/low angle rescue, confined space rescue, trench rescue, weapons of mass destruction mitigation, and leadership/officer development. To become proficient in the areas for which the modern day fire service is responsible is a daunting task and could take a volunteer, with inflexible hours, an entire career. This is yet another area of how the volunteer fire service is divergent from generic volunteer opportunities. One could assume that many volunteer opportunities do not require years and years of training prior to becoming a proficient and productive member of those services. However, the volunteer fire service is an opportunity for those who desire to learn new things to participate in a volunteer opportunity wherein there is always something new to learn.

As the literature review reveals, one could reject the theory that altruism and self-interest are independent and divergent in favor of the research from Rogers (1951) and Maslow (1950), who state that helping others can be both altruistic and self-serving. Gaining the knowledge and skills to help others in the fire service follows this proposition. One can gain knowledge and skills to help others in the fire service but that knowledge, those skills, the confidence to remain calm in emergencies, etc. are also conducive to self-improvement. Therefore, this category of joiner may find that although knowledge and skills are most important, the use of those skills in *helping others* and as *self-improvement* is also important. Figure 4.10 provides an overview of the motive to join ( $t_0$ ) concept map example for excitement/risk junkies.

Respondent 17a built a large concept map. *Friends in the fire service* and *obtaining full-time employment* were of low importance as a motive to join. These motives represent social and career factors respectively. *A sense of community involvement*, a values motive, was moderately important as a motive to join. Several highly important motives surround the others. The bottom of the map contains *personal pride/self-improvement*, an enhancement motive. The motive at the top of the map, representing the most important motive, is *being part of a valued public service*, another enhancement motive. *Helping others*, a values motive, is also highly important and, like many respondents, is a fundamental underlying motive. On the right side of the map, *getting skills/training* is highly important. This understanding motive is present among learners. It is important to note that *getting skills and training* relates to the enhancement motive that is most important to respondent 17a. *Getting skills and training*, an understanding motive, is on the opposite side of the concept map from *helping others*. The understanding motive relates to *sense of community involvement*, a values motive, and *obtaining full-time employment*, a career motive. Both of these responses are associated with pride/self-improvement. Both enhancement motives are listed on the same motive card.

While *helping others* is important to learners, the opposite side of the concept map requires attention too. *Getting skills/training* helps respondent 17a, like all learners, be *part of a valued*

*public service*. This suggests understanding motives complement enhancement motives. Below the understanding motive in the concept map, career and values motives complement enhancement motives. The relation of understanding motives to enhancement at the top of the map and pride/self-improvement at the bottom of the map demonstrates that understanding motives are both altruistic and self-serving in nature.

This is the first identification of the categories of joiners in this research. As discussed, motives to join among respondents may be vastly different from expectations to continue serving. These categories of joiners will allow an easier analysis of any motive drift that exists. I will discuss the analysis of expectations to continue serving among the snowball sample in Chapter 5. This chapter (Chapter 4) revisits these categories of joiners by examining the motives to join among the large-n sample using quantitative methods.

### **Aggregate Motive Concept Maps**

One of the most useful aspects of concept mapping is the ability to construct aggregate maps. Aggregate maps provide a composite illustration of the multiple responses among the sample. Beyond projecting the appearance of highly important versus less important motives to join, the aggregate maps also begin to demonstrate how motives to join relate to one another. The concept maps did not just consider the average importance among respondents but also the number of respondents that indicated the response was a motive to join. Prior to construction of the aggregate motive concept maps, this research considered only the breadth of the motives, their association with a theme, and their relative importance as illustrated by the card size. While construction of the aggregate motive concept maps considered the frequency of response and importance, they are not representative of the true population. I will use the quantitative sample and methods for that purpose.

To build the aggregate motive concept maps I first combined the individual responses into an aggregate motive to join ( $t_0$ ) concept map (see Figure 4.11). As the averages indicated, *friends/family in service* motives, *helping others* motives and *excitement* motives were all highly



important. It is possible that *friends/family in service* were the most important motive to join as a result of the snowball sample, which was made up of many respondents from small departments comprised of family members. These social aspects of this motive may be more important to respondents living in small communities with their families than respondents that live in large communities far from their families.

*Helping others*, a values motive, is a fundamental underlying motive across all respondents. The sacrifices involved for volunteer firefighters include a loss of time and money in the forms of the unpredictable nature of emergencies occurring and the fuel and clothes used during response and operations. However, volunteer firefighters also can potentially lose their lives during service. It is hard to imagine an individual that is capable of enduring these sacrifices without being motivated by altruism.

*Excitement*, a highly important enhancement motive, relates to both social and values motives. As the categories of joiners analysis demonstrated, family firefighters may be recruited by family to participate in the exciting work of serving others. As the excitement/risk junkies example illustrated, the *excitement* separates the way by which respondents *help others*. This provides a benefit to the exciting nature of the fire service over work in other volunteer opportunities that may be considered dull or monotonous.

*Obtaining training/acquiring skills* were moderately important and were related both to *helping others* and *self-improvement*. That *self-improvement*, because of increased training and skills, could also benefit those who are interested in *seeking full-time employment*. The position of the *obtain training/acquire skills* card in the concept map represents the aforementioned dichotomous relationship to enabling volunteers to better help others during emergencies and improving themselves to be better individuals.

Figure 4.12 illustrates the coded aggregated motive to join ( $t_0$ ) concept map among the snowball sample respondents. The qualitative analysis was designed to capture a wide breadth of motives as reported by the snowball respondents. Using the Clary, et al. (1998) framework, the individual

responses from the snowball respondents were compressed to a manageable span of motives. The coded aggregated motive map (Figure 4.12) allowed for the first glimpse of how the individual responses fit into the Clary, et al. (1998) framework.

When coded to the Clary, et al. (1998) framework and considering all of the motives to join among each of the six Clary, et al. (1998) factors, *family and friends in service* and *helping others* kept the social and values factors as highly important motives to join. Understanding motives, as represented by the individual responses of *acquiring skills* and *obtaining training*, were moderately important and related to the career motives (*obtaining full-time employment*) and enhancement motives. Where *excitement*, which served as an enhancement motive, was highly important, its importance average was marginal. Therefore, it was a moderately important motive to join. Enhancement motives relate to understanding motives because the more skills and training a respondent obtains the more effective they can be in the various types of incidents present in the fire service. Snowball sample respondents reported protective motives as having low importance. Figure 4.12 suggests that the use of enhancement and understanding motives to join during recruitment efforts can break out of the current use of values and social motives to join. This will recruit volunteer firefighters not currently accessed.

Figures 4.11 and 4.12 represent the first overall display of motives to join among volunteer firefighters. The results of the qualitative analysis of motives to join begin to answer research question one, but the frequency of the responses from the snowball sample is not reliable due to the sample size and sampling method. As designed, the qualitative results were important in informing the development of the quantitative survey instrument.

### **Quantitative Approach to Understanding Firefighters' Motives to Join**

Although the qualitative motive results begin to illustrate the breadth of the motives to join that exist among volunteer firefighters, one cannot draw conclusions from those results due to the non-probability sampling method and the small n sample size. I utilized the qualitative results, which narrowed the wide breadth of factors to a workable scope, in the construction of a survey

instrument distributed to a larger sample derived using probability sampling methods. The results of the survey instrument were analyzed using quantitative methods to leverage generalizable results among my population of volunteer firefighters in South Carolina.

#### *Introduction to Quantitative Survey Instrument*

The qualitative analysis was successful in identifying a wide range of motives to join the volunteer fire service. In order to understand the actual frequency of motives found within the population, I conducted quantitative analysis of a larger random sample. I constructed the survey using the results of the qualitative analysis, as outlined in Chapter 3. The 23 motives to join identified from the individual responses in the qualitative results were sorted into the six Clary, et al. (1998) factors. For completion of the survey instrument, I used the 16 individual responses to measure or constitute the corresponding Clary, et al. (1998) factor. The use of the individual responses, instead of the Clary, et al. (1998) factors, reduced the ambiguity and improved the understanding of prompts by respondents. This ultimately improved data collection and the estimates of reported frequencies. Unlike the qualitative results, where the individual responses had to be coded to the appropriate Clary, et al. (1998) factor after data collection, the survey instrument prompts for individual responses were associated with their corresponding Clary, et al. (1998) factor prior to distribution of the survey instrument. Table 4.3 outlines the quantitative individual responses used for survey prompts and their corresponding Clary, et al. (1998) factor. *Civic responsibility, helping others, and serving as a role model* were individual responses used in the survey instrument. These were the most important responses identified in the qualitative research. Of the enhancement motives to join, *excitement, being a member of a valued public service, and a feeling of accomplishment* were the most important responses from the snowball respondents and were therefore used in the survey instrument. The survey instrument also included the two understanding motives examined in the qualitative analysis, *obtaining training and acquiring skills*. Among the social factors, *an acquaintance, a close friend/family member, and fellowship* were most important and included in the survey. The two protective motives

included in the survey instrument were *payback the community for own successes* and *possessing sufficient resources to volunteer*. Although the evaluation of resources within the qualitative analysis was largely a comparison to others, the survey instrument evaluated a respondent's resources as a matter of each respondent's capabilities. When combined with the *payback to the community for own successes*, the protective factors described by Clary, et al. (1998) were accurately measured. Finally, *gaining employment, supplemental income, and networking with community and business leaders* were the three career factor related prompts used in the survey instrument, as they were the most important individual responses from the qualitative results.

#### *Aggregate Motive Importance*

First, I compiled the individual responses to evaluate the most important motives to join. Each individual response had an average importance calculated along with the associated standard deviation. This illustrated the relative importance when compared to other motives. Table 4.4 outlines the individual quantitative motive importance responses. Although the individual responses were useful, the Clary, et al. (1998) factors ultimately outlined the motives to join among the random sample.

As Table 4.4 illustrates, values motives, represented by *helping others* and *civic responsibility* were the motives to join with the highest importance according to the random sample. The third and final individual response for values motives, *serving as a role model*, was also moderately important. With two of the three values motives emerging as the top two most important motives to join, values motives appear to be the strongest and most robust motive to join according to the random, representative sample.

The random sample indicated that the three individual responses associated with enhancement motives, *excitement, being a member of a valued public service, and feeling of accomplishment*, were all highly important motives to join. Despite all of the enhancement motives being highly important to the random sample respondents, the mean importance for the three enhancement motives were far below the two most important individual responses related to values motives.

*Obtaining training*, the first individual response related to understanding motives, was just above the lower threshold for high importance. *Acquiring skills*, the second individual response related to understanding motives, was moderately important. Both understanding motives appeared at the lower end of highly important motives and at the upper end of moderately important motives to join.

Social motives to join, as evaluated by the *close friend/family member*, and *acquaintance* individual responses were moderately important, with the exception of *fellowship*, which was highly important according to the random respondents. Both of the protective motives individual responses, *possessing sufficient resources* to volunteer and *payback the community for own successes*, were moderately important. Recall that the qualitative analysis revealed that social motives and the presence of family in the fire service were highly important and dominated the responses from the snowball sample. The quantitative results from the representative sample reported social factors as less important as motives to join. This suggests that the opportunities for expansion of the recruitment pool like with understanding and enhancement factors.

Finally, the career motives were the least important to the random sample, with *networking with community and business leaders* as just above the lower threshold of moderate importance, while *gaining employment* and *supplemental income* were of low importance. It is important to note that *supplemental income* was the least important individual response overall with a mean that was just above the lower threshold for low importance and nearly unimportant. This suggests that the use of selective monetary benefits may not be the best approach to expand the recruitment pool. The representative sample suggests that monetary benefits do not work well for recruitment.

Table 4.5 and Figure 4.13 present relative importance of the motives to join the volunteer firefighter service within South Carolina. As the table and figure demonstrate, values motives were the motives with the highest importance within the quantitative results. Both the random sample respondents and the snowball sample respondents placed the highest importance across

the six Clary, et al. (1998) factors on values motives. Values motives consisted of *helping others* and *civic responsibility*, both of which were highly important to random sample respondents, as well as *servicing as a role model*, which was moderately important according to the quantitative results. The significance of values motives being the highest importance in both samples cannot be overstated. When attempting to identify the most significant motives to join among volunteer firefighters, values motives clearly warrant special attention. Even with the *servicing as role model* response possessing moderate importance, the much higher scores as a result of *helping others* and *civic responsibility* motives catapulted the values motives into the highest ranking across all Clary, et al. (1998) motives to join.

The random sample respondents also reported enhancement motives as highly important. In fact, the mean average of enhancement motives is only slightly below values motives. When considering the confidence intervals present in Figure 4.13, there is no statistical difference in import between enhancement and values motives. These results suggest that both values and enhancement factors are equally as important to prospective volunteers and are in the top tier of motives to join the volunteer fire service. Enhancement motives consisted of *excitement*, *being part of a valued public service*, and a *feeling of accomplishment*, all of which were highly important as individual responses. Enhancement motives possessed moderate importance in the qualitative results, but the quantitative results are the reliable and valid indicators of import due its sample size and method. Respondents in the random sample also reported higher importance for *being a member of a valued public service* and a *feeling of accomplishment* than their snowball sample counterparts. The results of the survey instrument also suggest that being part of an organization that is essential to the public and achieving a sense of accomplishment by joining the volunteer fire service are concepts that potential volunteers consider important while making the decision to join the fire service, even if they cannot fully understand or realize the concepts until after serving for some time.

Snowball sample respondents may have underreported the importance of enhancement factors given the face-to-face interaction and the tendency for experienced firefighters to deemphasize the *excitement* motive to join. Training in the fire service places emphasis on not being excited during emergencies. Instead, firefighters must remain calm and professionally execute the tasks necessary to stabilize the emergency. Being excited is associated with civilians and new firefighters. Veteran, established firefighters become much calmer and have a negative perception of excitement from their colleagues. This negative view of *excitement* may explain the lower importance reported by the snowball sample. Because the qualitative methods used face-to-face interviews and concept mapping exercises, respondents may have been less likely to report increased importance for *excitement*. This could explain the slightly higher importance responses among the random sample respondents. The survey instrument was anonymous and could have enabled random sample respondents the ability to be more honest in their assessment of *excitement*.

The random sample respondents, like the snowball sample respondents, indicated that understanding motives were of moderate importance. Understanding motives, along with social and protective factors, represent the second tier of importance among motives to join. This concurrence suggests that overall *obtaining training* and *acquiring skills* are not as important as the aforementioned values and enhancement motives that exist in the top tier of importance among motives to join. This confirms the qualitative assumption that potential volunteer firefighters consider understanding motives as a secondary concern. Joining the volunteer fire service to *obtain training* and *acquire skills* is not the most important motive to join. Instead, it is likely that understanding motives are not fully understood at the time a volunteer joins, as established in the qualitative interviews. Understanding motives are more likely to exist in support of the more important motives to join, values and enhancement motives. This creates an opportunity for recruitment however. The categories of joiner analysis revealed that excitement/risk junkies place importance on enhancement and values motives to join.

Excitement/risk junkies can be recruited by offering enhancement and values factors. Then, the recruit is indoctrinated into proper practices using understanding factors. This bait-and-switch method is similar to what the military uses during recruitment. While many who sign up for military service do so to fight in the Special Forces or fly the latest and greatest fighter jet, very few get this opportunity. Once they indoctrinate, the recruit learns there are many other tasks that serve the greater purpose of a highly functioning military. In both the cases of the military and the fire service, the understanding factors that are necessary for the organization to function at a high level can replace enhancement motives used for recruitment. Additionally, the categories of joiner analysis revealed that learners are a distinct group of potential volunteers outside of the current pool. These potential volunteers are also more likely to volunteer when offered understanding factors as part of their recruitment.

Social motives, that were highly important in the qualitative results, possessed moderate importance in the quantitative results. This is likewise another opportunity for recruitment improvement. While social factors appear to be very important to the snowball respondents, the representative sample suggests otherwise. This suggests that there is room outside of the traditional recruitment pipeline of family firefighters by using motives other than social factors. Social motives in the survey instrument included *fellowship*, a highly important motive to join, as well as *close friends/family members* and *acquaintances*, both of which possessed moderate importance. The presumption that social motives are the most important motive to join, as established in the qualitative results, is obviously not representative of the overall population. As previously discussed, the higher importance in the snowball sample may be the result of the sample composition. Perhaps the fact that the random sample consisted of a higher number of unrelated respondents across a wider area of the state resulted in a decrease in the importance of social factors. Given the nature of the random sample and its method of derivation when compared to the snowball sample, the quantitative results must be favored over the qualitative results. Therefore, social motives to join are moderately important. Although social motives,



such as *family and friends*, are highly important to some prospective volunteers, particularly in rural areas with small populations, they are not the key to recruitment overall as the qualitative results suggest. The higher importance associated with *fellowship over friends/family, and acquaintances* also suggests that where social motives are in play, it is the *fellowship* offered by the organization, rather than a member of the organization externally influencing a potential volunteer, that is of greater importance. The categories of joiner analysis revealed that family firefighters rely primarily on social motives, followed by values motives. Overall, social and values motives represent second tier and top tier of importance respectively. The social structure of family and close friends creates an insular recruiting pool that is limited in its numbers. This closed recruitment pool cannot fulfill future demand for volunteer firefighters. To recruit outside of this pool, fire service leaders should focus on enhancement and understanding motives to join, which also represent the top tier and secondary tier of importance respectively.

Protective motives appeared to be of low importance as calculated in the qualitative analysis.

However, the quantitative analysis revealed that protective motives are moderately important.

Although Figure 4.13 demonstrates that protective motives emerged alongside understanding and social motives in the secondary tier of importance, protective motives are clearly a tertiary consideration according to the representative sample. Protective motives appear to simply be another factor to consider in addition to the aforementioned motives to join. In the qualitative methods, the focus of protective motives was on *resources that others do not possess*. By comparison, the quantitative methods explored protective motives related to resources in two ways, *possessing resources necessary to volunteer* and *paying back the community due to the respondent's success*. Only a few snowball sample respondents mentioned this payback or reciprocation during the qualitative interviews. When queried regarding protective motives and the comparison of their own resources against others, snowball sample respondents reported low importance. The random sample respondents, forced to evaluate the payback to the community in their motive calculi, ultimately reported it as having moderate importance. The importance of

this motive was slightly lower than the consideration of resources, which the random sample respondents considered as a function of their ability to volunteer rather than as a comparison of their resources to others, like the snowball sample respondents. The more reliable quantitative results suggest that resources are a necessary consideration for volunteer firefighters. This consideration though is related to *paying back the community* and as a function of having the ability to volunteer, rather than the guilt relief described by Clary, et al. (1998).

According to the quantitative results, career motives to join are of low importance. Career motives represent the only Clary, et al. (1998) factor with low importance and consisted of *seeking full-time employment* and *supplementing income*. The results suggest that appeals to retirement benefits or per call pay may not be very useful for recruitment purposes. As previously established, the latter was widely unimportant to both the snowball and random samples. *Seeking full-time employment* may be important to a limited number of volunteer firefighters at the time they join; however, the consensus is that there are a myriad of more important motives. This is clear in both the qualitative and quantitative results, which demonstrate that career factors are the motives to join with the lowest importance.

Overall, the quantitative results reveal the answer to research question number one. First, it appears that values motives are the strongest, most robust among respondents when joining the volunteer fire service. The individual responses among values factors included *helping others* and *civic responsibility*, which possessed the highest importance by far among the representative sample. Enhancement factors were also highly important with a mean just below values motives. Individual responses for enhancement factors included *being a member of a valued public service*, *feeling of accomplishment*, and *excitement*. All of these individual responses were highly important according to the random, representative sample. This suggests that values and enhancement motives to join exist within the primary level or highest tier of importance. These motives to join are the primary considerations overall among the random sample respondents. In

fact, when considering the confidence intervals in Figure 4.13, there is no statistical difference between values and enhancement motives to join.

Understanding factors emerged at the top of the second tier of importance, included obtaining training and acquiring skills. Social factors included the individual responses *fellowship*, *close friend/family member*, and *acquaintances*. Despite the qualitative results suggesting a high importance for social motives, the quantitative results refuted this claim. The result is that social factors, although important to some prospective volunteers such as family firefighters, are clearly in the second tier of importance among the representative sample. Protective motives, which included *possessing sufficient resources to volunteer* and *payback the community for own successes* as individual responses, possessed a mean below social factors. Although the mean suggests that protective motives to join are moderately important, they emerged at the bottom end of the second tier of importance. Although protective motives warrant some consideration, it is clearly of secondary and perhaps tertiary appeal among potential volunteers.

Finally, career motives to join emerged as possessing the lowest importance among the representative sample. Career motives included *networking with community and business leaders*, *gaining employment*, and *supplemental income* as individual responses among the survey respondents. All of these career related individual responses possessed the lowest importance among all individual survey responses.

These results suggest that the most important motives to join among potential volunteer firefighters are values and enhancement motives. This is an important observation. As the categories of joiner analysis revealed, family firefighters rely heavily on social factors.

Unfortunately, this social system creates a limited pool of potential volunteers. Fire service leaders can expand their pool of recruitment by using the motives within the top tier of importance, namely values and enhancement motives. By appealing to values and enhancement motives to join, the fire service is not limited to its current volunteers and their families. This has an effect of instantly making the recruitment pool larger. Although expectations to continue

serving are not examined until Chapter 5 of this research, it is also possible that prospective volunteers such as risk/excitement junkies can be recruited using enhancement motives and then indoctrinate them into proper practices using understanding and values factors. This sort of bait-and-switch approach could also be used for learners. Using understanding motives, learners, another distinct group outside of the current recruitment pool, will be attracted to joining the volunteer fire service. They, too, can be indoctrinated by using values and enhancement factors, which are the primary motives to join overall.

In conclusion, values and enhancement motives are in the top tier of importance among prospective volunteer firefighters. Understanding, social and protective motives to join are in the secondary tier of importance. Career motives to join are in the tertiary tier of importance. Indoctrination should eventually involve the use of values and enhancement motives regardless of the category of joiner considered. Fire service leaders should show altruists the potential enhancement benefits at the time of recruitment, such as *being a member of a valued public service, feeling of accomplishment, and excitement* at the recruitment stage. For excitement/risk junkies, the benefits associated with values motives can aid in their recruitment. These include the opportunity to *help others, civic responsibility, and serving as a role model* for others. The volunteer fire service can recruit outside of family firefighters by placing emphasis on both values and enhancement motives. Finally, learners are another distinct group of potential volunteers that fire service leaders can access through placing emphasis on understanding motives during the recruitment stage. Given that the modern fire service continually offers new educational opportunities and new tasks to learn, understanding motives could be very attractive to learners that are potential volunteers. These approaches will improve the recruiting pool and better appeal to the motives to join among potential volunteer firefighters.

#### *Institutional Differences*

With research question one answered, this research next considered several alternative explanations using the additional information available from the data collected. Following these

additional conclusions, I will discuss any relevant changes in the answer to research question one. The similarity in the composition of respondents previously identified in the sample comparison suggests that there is the possibility that other factors influence motives to join. As a result, the six Clary, et al. (1998) factors were analyzed while controlling for the various institutional factors (see Table 4.6) and demographic factors (see Table 4.7). During the analysis, I used a difference of means test to identify any statistically significant differences between the average reported importance for each of the control variables. The analysis of control variables revealed several areas of interest.

As illustrated in Table 4.6, there were no statistically significant differences in means between respondents from wholly volunteer departments and those from mostly volunteer departments. The only statistically significant difference between the rural versus suburban/urban means was enhancement factors. Suburban/urban respondents place a higher importance for enhancement motives to join than their rural counterparts did. Despite the significance, the difference of means test suggests that suburban/urban volunteers only report a 0.146-point higher importance for enhancement motives to join. If the effects of social systems are more powerful in smaller, rural areas, it is intuitive that enhancement factors could be higher in larger, loosely connected communities.

Figure 4.14 provides a graphical illustration of the comparison of motives to join among respondents from wholly volunteer versus mostly volunteer departments. As Figure 4.14 demonstrates, the order of importance among motives is identical between respondents from wholly volunteer versus mostly volunteer departments. When considering the 95% confidence, there is no difference in the tiers of importance of the motives to join between respondents from the two types of departments analyzed.

Next, the research compared respondents from departments serving rural populations to respondents from departments serving suburban/urban populations (see Figure 4.15).

Figure 4.15 provides an illustration of Table 4.6. The comparison of respondents serving rural populations versus suburban/urban populations reveals the similarities between the two subsets. Although respondents from departments serving suburban/urban areas had a slightly higher statistically significant mean importance for enhancement motives, the comparison in Figure 4.15 suggests that they are largely similar to respondents serving rural areas.

#### *Demographic Differences*

During the search for alternative explanations, the influence of various demographic characteristics among respondents was considered. Among these demographics, age, gender, race, marital status, parental status, and years of service were evaluated. As discussed throughout this research, the sample lacked a large number of racial minorities and females. Therefore, the traditional volunteer firefighters (white males) were compared to female and racial minority respondents. Family history in the fire service was also included, as the social influences of this could be powerful. Continuous versus intermittent service and whether a respondent possessed full-time employment as a firefighter in another jurisdiction was also included. Table 4.7 establishes the importance means for each of the Clary, et al. (1998) motives to join separated by each of the demographic control variables described previously.

According to Table 4.7, among the demographic control variables, values motives to join were higher among non-traditional and unmarried respondents and statistically significant. The difference of means suggest that non-traditional volunteers consider *helping others*, *civic responsibility*, and *servicing as a role model* more important than respondents that are white males. The higher reported mean among unmarried respondents is understandable. Unmarried respondents do not possess the family responsibilities that married respondents possess. This allows unmarried respondents more time to commit to values motives during the recruitment stage.

Understanding motives were also of higher importance among unmarried respondents. It is feasible that married respondents have family responsibilities, which creates less available time.

Unmarried respondents, with more available time, are more attracted to the understanding motives to join, such as *obtaining training* and *acquiring skills*.

Statistically significant differences of means for career motives exist among several demographic control variables including volunteer firefighters below age 44. Non-traditional respondents (those that are not white males) consider career motives more important. Unmarried respondents reported a higher mean for the importance of career motives than respondents that are married. Respondents without children also reported a higher mean than respondents who are also parents. Years of service also produced a statistically significant difference in means among the representative sample. Those with less than 20 years of service reported a higher mean than respondents that have served for 20 or more years. As expected, respondents with full-time employment in the fire service reported a higher difference of means than respondents that did not serve as both a volunteer and full-time employee in the fire service. These results reveal that the importance of career motives when joining do differ slightly among several demographic control variables. It is intuitive that younger respondents without spouses and children and less years of service would consider career motives more important at the time they join. Older volunteers with established families and more years of service are more likely to already have established occupations and therefore consider career factors less important. The largest difference of means for career factors was for marriage, wherein unmarried respondents place a higher importance. This likely relates to the aforementioned understanding motives. Unmarried respondents lack family responsibilities. Therefore, they are likely more mobile and more likely to pursue careers in the fire service by using factors related to understanding motives, which they also found more important.

As expected, social motives are more important during the recruitment stage to respondents with a family history of firefighting. The difference of means for social motives between legacy and non-legacy volunteers is large. This demonstrates the power of the family influences at the

recruitment stage, though it is interesting to note that the only motives to join that were statistically different among legacy firefighters were social motives.

Five demographic control variables yielded statistically significant difference of means among protective motives. Respondents below age 44 reported a higher mean than respondents that are 44 years old or older. Non-traditional respondents (those that are not white males) reported a higher mean for protective motives to join than respondents that were white males. Married respondents have a higher mean for protective motives than respondents that were unmarried. Likewise, respondents with no children have a higher mean than respondents that have children. Finally, respondents with less than 20 years of service have a higher mean for protective motives. Although statistically significant, none of these differences of means represent a large variance between controls. Nevertheless, protective motives are slightly more important during the recruitment stage to younger, non-traditional, unmarried respondents, with less than 20 years of service and no children.

Only one control variable had a statistically significant difference of mean among enhancement motives. Unmarried respondents reported a higher importance for enhancement motives than respondents that were married. This difference is minimal when compared to the other results among demographic control variables. This suggests, by a small margin, unmarried respondents consider *excitement*, *being a member of a valued public service*, and *a feeling of accomplishment* more important than married respondents consider.

The variances among these control variables required additional examination. I created bar charts for the levels of each of the demographic control variables with statistically significant difference of means. First, I examined the influence of age among respondents. Figure 4.16 provides a graphical comparison of the respondents at and below the average age of the sample versus those that were above the average age.

Figure 4.16 illustrates that both protective and career motives to join are higher among younger volunteers. Although Table 4.7 demonstrates that these variances are minimal, they are



noticeable in Figure 4.16. This suggests, that by a small margin, younger volunteers consider *paying back the community for their own successes, having resources necessary to volunteer, gaining employment, supplemental income, and networking with community and business leaders* more important than volunteer firefighters that are 44 years old and older.

The random sample consisted of a small number of females and racial minorities. As the long-established volunteer firefighter is a white male, I again compared white male volunteers against non-traditional (respondents that are not white males) to determine if there was a difference between the order and magnitude of the importance levels they assigned to the six Clary, et al. (1998) motives to join. Figure 4.17 outlines the variances.

Figure 4.17 illustrates that values, career and protective motives are clearly higher among non-traditional respondents. While Table 4.7 also suggests a minimal difference of means among these motives, Figure 4.17 demonstrates a graphical representation of these variances. Career and protective motives appear to be more attractive to non-traditional volunteers. If prospective volunteers can realize employment opportunities, then career motives could aid in recruiting more volunteers that are non-traditional. Table 4.7 suggests that marital status is one of the most influential control variables. Statistically significant difference of means existed among each set of motives to join except social motives. Figure 4.18 illustrates the error bars for each of the motives to join for married versus unmarried respondents. Figure 4.18 reveals that marital status is influential among volunteer firefighters. While values and enhancement motives are higher among unmarried respondents, the largest difference of means exists among understanding, career, and protective motives. Of these, understanding motives has the highest importance and is outside of the values and enhancement motives used in current recruiting structures. Fire service leaders struggle to recruit outside of these existing structures, which are insufficient. These leaders should consider the use of understanding motives for prospective volunteers that are not married. Although career motives throughout the research have been of the lowest

importance overall, it is important to note that unmarried respondents reported higher mean importance for career motives.

Figure 4.19 illustrates the differences between volunteers that are also parents and those without children. Table 4.7 demonstrates that respondents without children reported a higher importance of both career and protective motives to join.

Like marital status, respondents without children do not have the family responsibilities that respondents that are parents have. Protective motives are slightly higher among respondents without children. Career factors are much more important to those same respondents. Despite this variance between the subsets, these motives exist in the lowest tier of importance among all motives to join.

Like parental status, Table 4.7 illustrates that years of service has a statistically significant effect on career and protective motives also. Figure 4.20 provides a graphical comparison of the respondents with 19 years of service or less versus respondents with more than 19 years of service.

As Figure 4.20 illustrates, career and protective motives fade with service. While the order of importance changes from respondents with less service to respondents with more service, the motives to join remain in three distinct tiers. Values and enhancement motives remain in the top tier of importance. Understanding, social, and protective motives remain in the middle tier of importance. Career motives remain in the low tier of importance.

As Table 4.7 suggests, legacy firefighters, those with a family history of firefighting, place a higher importance on social motives than their non-legacy counterparts. As a result, I created another error bar chart to compare what other motives may also vary between legacy and non-legacy respondents (see Figure 4.21).

Figure 4.21 suggests a high variance of social motives between volunteers with a family history of firefighting (legacy firefighters) and those without a family history of firefighting (non-legacy firefighters). Social factors are the only motives to join with statistically different means. Fire

service leaders cannot create a family history of firefighting for potential volunteers. In lieu of this, Figure 4.20 shows that fire service leaders should utilize understanding motives to recruit outside of the existing insular group of volunteers that are family members.

There were no statistically significant difference of means for any motives to join among respondents with continuous service when compared to those with intermittent service.

Finally, I compared respondents with full-time employment in the fire service against those with employment in another occupation. Figure 4.22 illustrates the motive to join comparison between these two subsets.

Figure 4.22 illustrates no large difference between these two subsets, with the exception of the set of motives that is expected. Career motives are more important to respondents that possess full-time employment in the fire service. This is understandable and is likely a product of requiring respondents to report, retrospectively, the importance of motives at the time they joined the volunteer fire service. Clearly, those who found employment in the fire service would retrospectively report a higher importance of career motives at the time they joined. No other sets of motives had a statistically significant difference of means for this subset.

The overall motive results suggest that values and enhancement motives exist in the top tier of importance, followed by understanding, social and perhaps protective motives in the second tier of importance. The third tier of importance contained career motives and perhaps protective motives. If career and protective motives are ignored, due to their lower importance overall, there are only three control variables with statistically significant difference of importance means. One of these is family history of firefighting and the difference of means is intuitive. Legacy firefighters, those with a family history of firefighting, understandably place a higher importance on social motives to join. This is understandable given the close-knit, insular group of firefighters influenced by family members.

The other two control variables require close attention. Traditional volunteers (white males) report a lower importance for values motives than non-traditional respondents report. Fire service

leaders can increase their recruiting pool by stressing values motives to non-traditional volunteers. This would also increase diversity throughout the volunteer fire service. Marital status had the single highest number of statistically significant differences of means across all motives to join. Only social motives to join were not statistically different between married and unmarried respondents. The analysis reveals that unmarried respondents report a higher importance for values, understanding, and enhancement motives to join. Fire service leaders should also consider these differences during recruitment efforts, as it is clear that marital status is somewhat influential at the recruitment stage.

### **The Mixed Methods Approach and Determining the Categories of Joiners**

The next step in the quantitative analysis was to identify respondents that fit into the four categories of joiners previously identified by the qualitative analysis. This occurred by analyzing the various variables and responses from the random sample respondents. The purpose of this analysis was two-fold. First, it evaluated the number of respondents in each category present in the random, representative sample. Second, error bar charts were generated to insure that each subset was representative of its appropriate category of joiner. This will allow for additional analysis on expectations and satisfaction outlined in Chapters five and six. Without insuring that respondents in each category of joiner were properly selected, it is possible that the expectation and satisfaction analysis could be inaccurate.

#### *Family Firefighters*

I identified family firefighters by selecting those with a family history of firefighting. These respondents reported high importance in close friends/family members as a motive to join and reported a family history of firefighting (respondents that were legacy firefighters). This separated respondents from others for the family firefighter category and I created a dichotomous variable for this group of respondents for additional analysis. This categorization yielded 85 respondents classified in the “family firefighter” category of joiners. Figure 4.23 illustrates the motive to join comparison among family firefighters.

Figure 4.23 illustrates that this subset of respondents includes social motives in their most important tier of motives to join. Like the overall results, family firefighters consider values and enhancement motives as highly important during the recruitment stage. However, the family history of firefighting and the high importance of family members as a motive to join, separates family firefighters from other respondents. Understanding and protective motives to join emerge in the secondary tier of importance for family firefighters. Career motives, like the overall results, appear as a clear tertiary consideration during the recruitment stage.

#### *Excitement/Risk Junkies*

The analysis classified excitement/risk junkies by selecting non-legacy respondents that reported that they had equipment (warning light, siren, and/or radio) in their personal vehicle and reported high importance for excitement as a motive to join. This categorization yielded 45 respondents classified as excitement/risk junkies. Figure 4.24 illustrates the error bar graph for motives to join among excitement/risk junkies.

Figure 4.24 outlines that subset of respondents place the highest importance on enhancement motives, which emerges in the primary tier of importance. The secondary tier of importance includes values motives, understanding and protective motives. Social motives are at the lower end of the secondary tier and the top end of the tertiary tier of importance, which only includes career motives. Clearly, enhancement motives, such as *excitement*, possess a slightly higher mean importance and a narrower standard deviation than values motives. This suggests that the excitement/risk junkie subset of respondents created is representative of its corresponding category of joiner.

#### *Learners*

Respondents were classified as learners that were not previously classified as family firefighters or excitement/risk junkies. Learners were non-legacy firefighters, did not report high importance for enhancement motives, and instead reported high importance for understanding motives to join. The learner classification also required that respondents must also have reported that they

did not possess equipment (warning light, siren, and/or radio) in their personal vehicle. This categorization yielded 47 respondents. Figure 4.25 provides a graphical illustration of the mean importance for learners' motives to join.

As Figure 4.25 illustrates, learners place more importance on understanding motives to join.

Values motives closely follow understanding motives, which together make up the primary tier of importance. The secondary tier of importance for learners includes enhancement, protective, and social motives. Career motives emerge in a clearly defined tertiary tier of importance. Despite the small sample size selected for this category of joiners, Figure 4.25 suggests that those selected are representative of the learner category of joiner.

#### *Altruists*

The final category of joiner examined was altruists<sup>6</sup>. This subset categorized respondents that were non-legacy volunteers and placed importance on values motives above understanding, enhancement, and social motives. This categorization yielded 40 respondents classified as altruists. Figure 4.26 outlines the motives to join among altruists.

Figure 4.26 illustrates that values factors are the most important motives to join for altruists and they exist alone in the primary tier of importance. The secondary tier of importance includes enhancement, understanding, protective, and social motives. As usual, career motives emerged in a clearly defined tertiary tier of importance. The high importance and narrow standard deviation for values motives is indicative of altruists. Figure 4.26 confirms that this altruist group created using the scheme above is representative of the altruist category of joiner.

The analyses performed and represented by Figures 4.23 through 4.26 suggest that respondents were properly selected and classified into their appropriate category of joiner. This is apparent by

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<sup>6</sup> Four respondents from the 217 in the random, representative sample did not fit the categorization scheme due to reporting no highly important motives or reporting moderately important motives related to the four categories. These were examined individually and classified using their most important motive to join, the relative importance of their motives to join, and their response to the open-ended question on the survey instrument ("If there was a specific event or other factor that has been important to your service, please list it here.").

examining the error bar chart created for each category of joiner. As expected, family firefighters place primary importance on social motives to join, excitement/risk junkies consider enhancement factors the motives to join with the highest importance, learners place the most importance on understanding motives to join, and altruists consider values factors the most important motives to join. This insures that expectation and satisfaction analysis of these categories of joiners in future chapters will be utilizing the appropriate respondents during that analysis, making the analysis reliable.

Beyond confirming the appropriate classification, the motive analysis of the categories of joiners revealed the quantity of respondents for each category within the representative sample. Family firefighters included 85 respondents, excitement/risk junkies included 45 respondents, learners consisted of 47 respondents, and 40 respondents were classified as altruists. Recall that the quantitative sample was derived using probability methods, selected respondents randomly and is representative of the South Carolina volunteer firefighter population. The sample composition suggests that 39.2% of South Carolina volunteers are family firefighters, who consider social motives as the most important motives to join. Excitement/risk junkies make up 20.8% of the population. Learners represent 21.7% of the population. South Carolina volunteers consist of 18.4% altruists<sup>7</sup>.

These results show that a little more than one-third of the recruitment of volunteer firefighters is from family firefighters. These volunteers are from the aforementioned insular group of related people. Fire service leaders should consider the use of motives that attract other categories of joiners to increase recruitment. The largest group aside from family firefighters is learners, representing a little more than one in five volunteers. These volunteers consider understanding motives most important at the recruitment stage. The category of joiner analysis reveals that one out of five volunteers is also a risk/excitement junkie. These firefighters place a higher importance on enhancement motives to join. Altruists also represent another one in five

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<sup>7</sup> Percentages do not equal 100% due to rounding.

volunteers. These volunteers consider values motives most important. The use of values, enhancement, and understanding motives breaks out of the insular family firefighter pool and allows access to additional volunteers, thereby increasing recruitment.

### **Chapter Conclusions**

This portion of the research used both qualitative and quantitative methods to analyze motives to join among South Carolina volunteer firefighters. These methods identified a wide range of motives to join among the respondents, categorized these motives according to the Clary, et al. (1998) framework, developed categories of joiners based on the prevailing motives to join and then analyzed the frequency of individual responses to identify the most important motives to join.

I used the small-n snowball sample, derived as described in Chapter 3, to conduct interviews.

The results of these interviews informed the construction of a motive to join concept map for each snowball sample respondent. The results of these concept maps identified a wide breadth of concepts. These concepts were used to separate the volunteer fire service from other generic volunteer opportunities, as a great deal of the extant literature on volunteering addresses only generic volunteer opportunities. The wide breadth of motives to join was then collapsed into the Clary, et al. (1998) framework, which allowed for a more manageable set of concepts. The individual responses and their relative frequencies among the snowball sample informed construction of a survey instrument that could be used with a larger sample. Again, the six Clary, et al. (1998) factors served as a guide to survey construction. Finally, the qualitative analysis identified four categories of joiners based upon the primary motives to join. These will serve as subsets through which additional analysis can occur using the larger sample.

Next, the quantitative methods continued this research by distributing the survey instrument to a random sample of South Carolina volunteer firefighters. The use of a random, probability sample provided leverage to draw inferences from the resultant data and much more reliable estimates regarding individual responses. The survey responses were analyzed and then again classified



using the Clary, et al. (1998) framework. The quantitative results found that values factors were most important to random sample respondents, followed closely by enhancement motives. Understanding, social, and protective motives were only moderately important across the random sample. Career motives to join were of low importance. Next, the research explored alternative explanations by examining the motive importance separated by multiple institutional and demographic control variables. This analysis found that race, population type served, marital status, and family history of firefighting had influences among respondents' motives to join the volunteer fire service. Finally, the categories of joiners established during the qualitative analysis was used to segregate survey respondents into their respective category, based upon their prevailing motives to join. I constructed error bar charts for each category of joiner to verify that respondents were appropriately segregated and to determine the size of each category among the South Carolina volunteer firefighter population. This is important, as it will affect the future expectation and satisfaction/retention analysis in Chapters 5 and 6.

This motive analysis is necessary to recruit new volunteers, as the current level of volunteer firefighters is insufficient and not sustainable. Using the Clary, et al. (1998) framework, values and enhancement motives to join are in the primary tier of importance overall. Understanding and social motives are in the secondary tier of importance. Protective motives emerged at the lower end of the second tier or top end of the third tier. The tertiary tier of importance also contained career motives, which were of the lowest importance overall.

Among the control variables, only one institutional and three demographic controls had statistically significant difference of means when considering the motives to join in the primary and secondary tier of importance. In institutional controls, enhancement factors are of higher importance among volunteers in suburban/urban areas, although the difference in mean importance was minimal. In demographic controls, legacy firefighters consider social motives more important when joining. This is understandable given the insular group from which legacy firefighters often join. Traditional volunteers (white males) reported lower importance for values

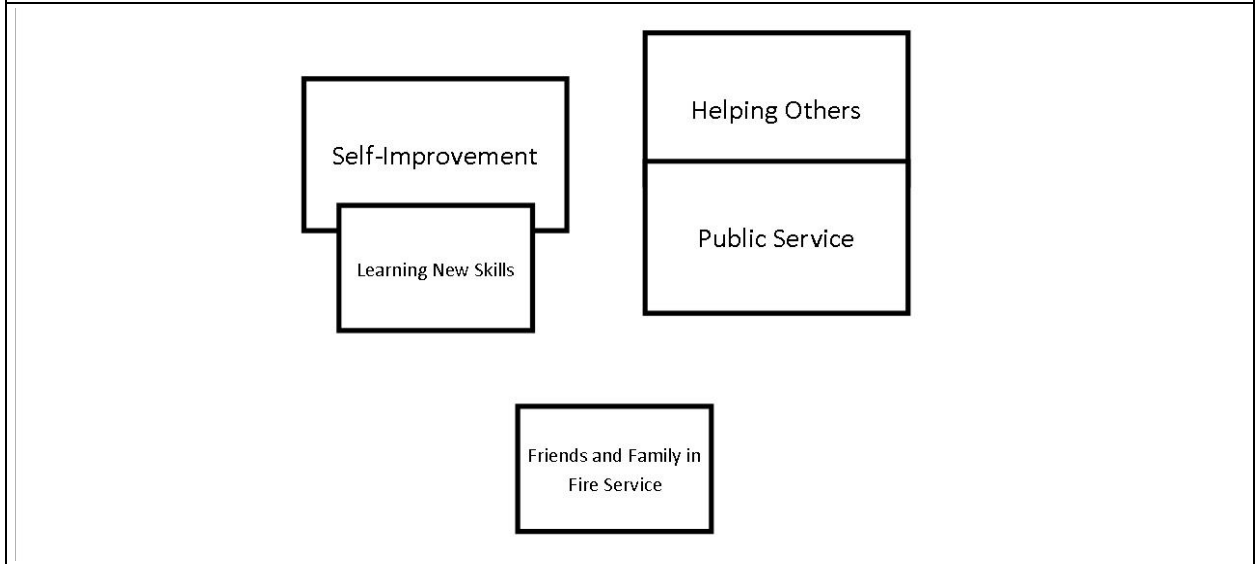
motives to join when compared to non-traditional volunteers. The use of values motives during recruitment efforts provides another opportunity for improving recruitment and increasing diversity. Marital status had statistically significant difference of means. Married respondents reported lower importance for values, understanding, and enhancement motives. This is another consideration for fire service leaders when recruiting unmarried respondents outside of the motives in the primary tier of importance, who consider understanding motives more important than their married counterparts do.

Finally, the category of joiner analysis reveals that two out of five volunteers come from the family firefighters group. These are legacy volunteers with a family history of firefighting and consider the influence of family on joining highly important. To break out of this closed group of prospective volunteers, fire service leaders should consider utilizing values, enhancement, and understanding motives during recruitment and targeting other categories of joiners. This provides access to the other three out of five volunteers classified as altruists, who consider values motives most important; excitement/risk junkies that consider enhancement motives most important; and learners, who consider understanding motives most important. The use of social and values motives during recruitment are in the current model given the influence of family members on joining and the high importance of values motives. Recruitment change is needed to increase future numbers of volunteer firefighters. Fire service leaders should consider the use of enhancement and understanding motives to break out of the current model and attract additional volunteers.

This research assumes that the motives discovered in this chapter are naïve, uninformed, and may change with exposure to service. The research explored this and the following chapter (Chapter 5) discusses this and begins to consider retention of existing volunteer firefighters. Despite the great interest in the drift from naïve motives to join and informed expectations to serve, the analysis of this chapter answers research question one which addresses only motives to join. While retention is important particularly when considering the current staffs of fully trained

volunteer firefighters nationwide, it is also necessary to understand how to recruit new volunteers to replace those that disengage from service for reasons beyond our control. The results of this chapter speak to that recruitment and identify the motives to join the fire service among the volunteer firefighters in the state of South Carolina.

**Figure 4.1: Values Motives to Join (t<sub>0</sub>) Concept Map**



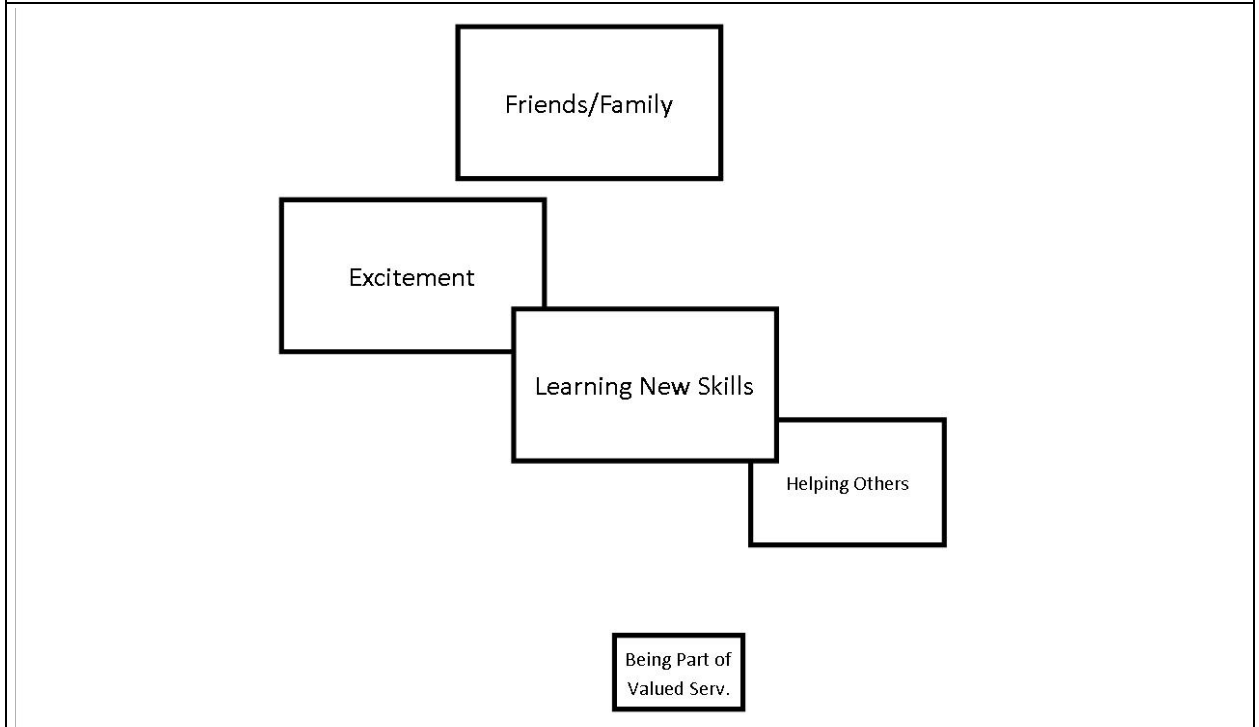
Note: This concept map represents actual data from snowball sample respondent 8 as an example of a respondent with an importance emphasis on helping others. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 4.2: Enhancement Motives to Join (t<sub>0</sub>) Concept Map**



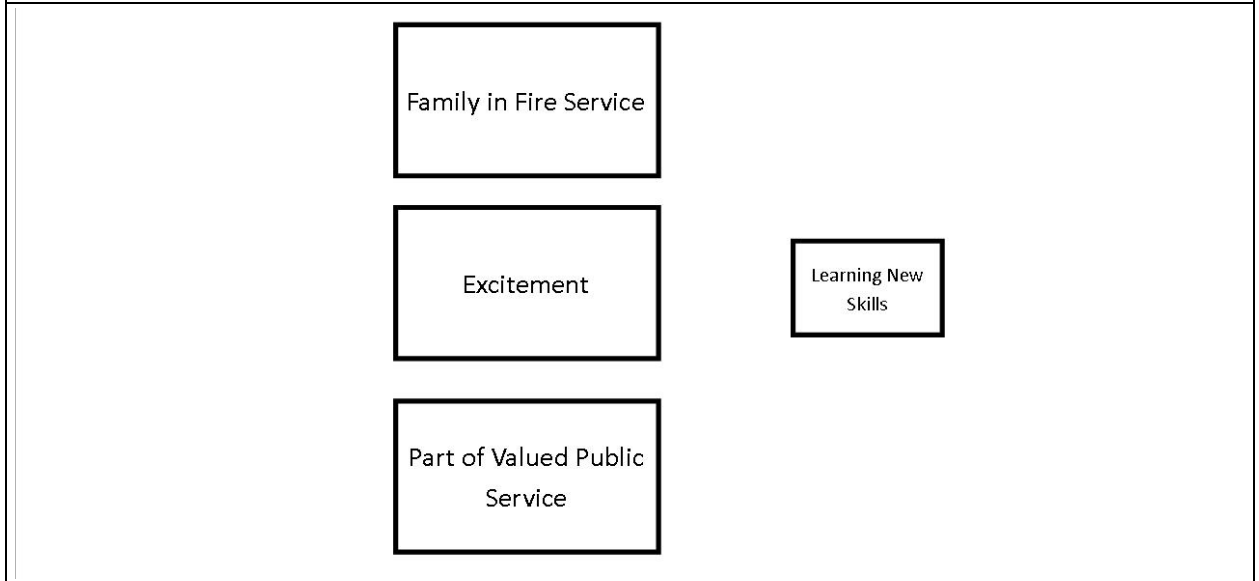
Note: This concept map represents actual data from snowball sample respondent 20 as an example of a respondent with an importance emphasis on excitement. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 4.3: Understanding Motive to Join (t<sub>0</sub>) Concept Map**



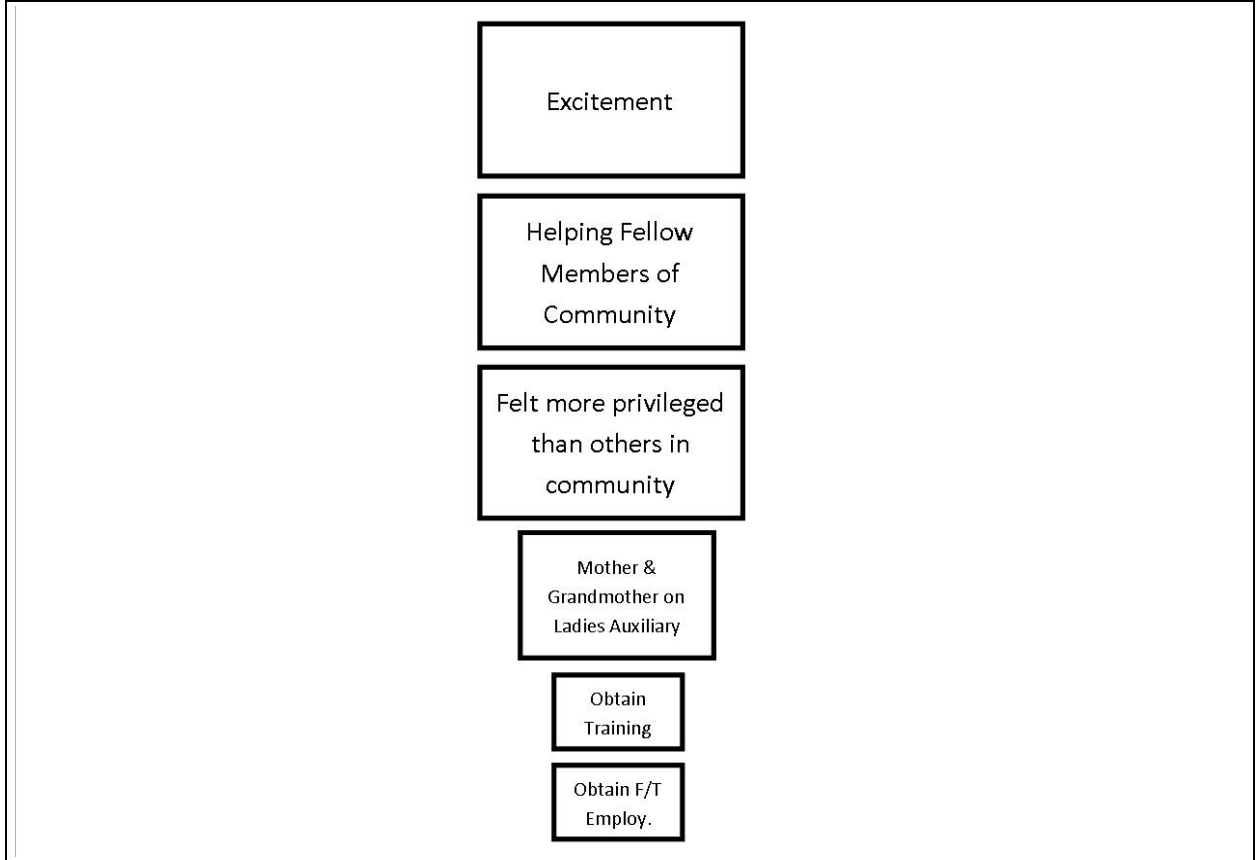
Note: This concept map represents actual data from snowball sample respondent 18 as an example of a respondent with an importance emphasis on understanding motives. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 4.4: Social Motives to Join (t<sub>0</sub>) Concept Map**



Note: This concept map represents actual data from snowball sample respondent 19 as an example of a respondent with an importance emphasis on friends/family in service. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

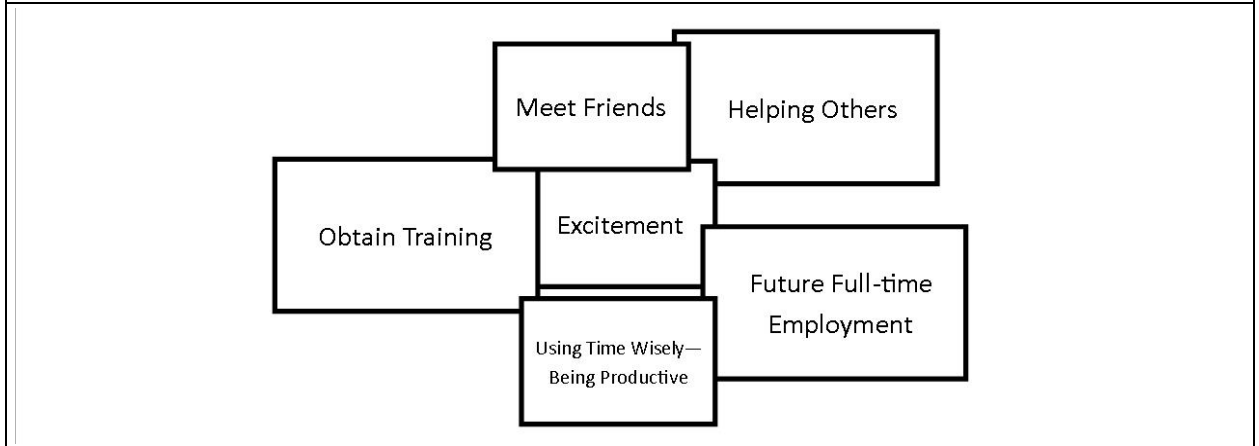
**Figure 4.5: Protective Motives to Join (t<sub>0</sub>) Concept Map**



Note: This concept map represents actual data from snowball sample respondent 30 as an example of a respondent with an importance emphasis on protective motives, such as guilt relief. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

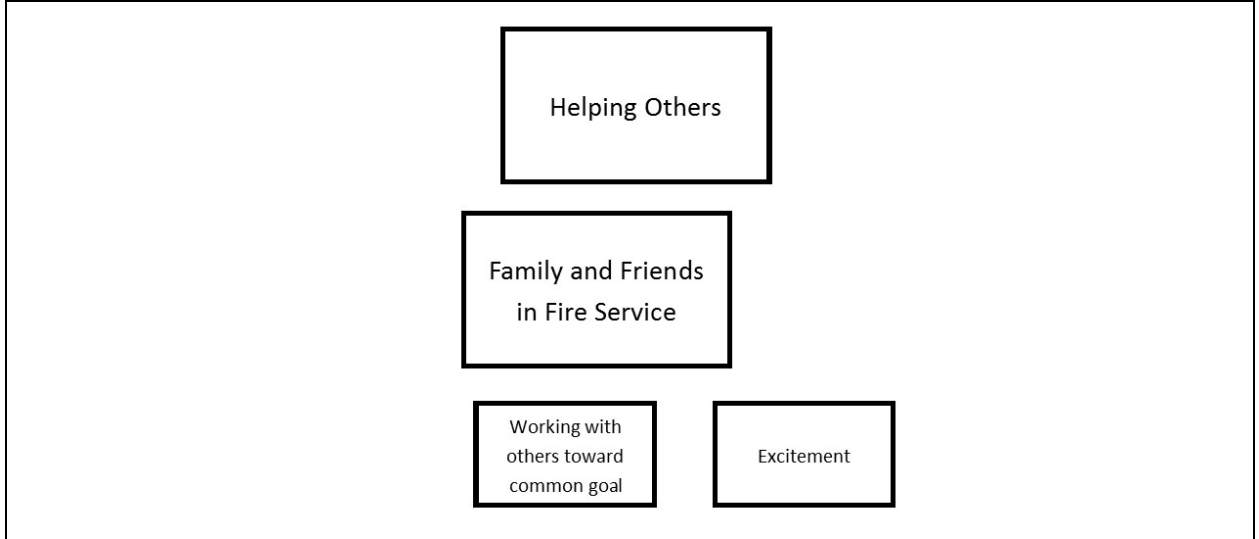


**Figure 4.6: Career Motives to Join (t<sub>0</sub>) Concept Map**



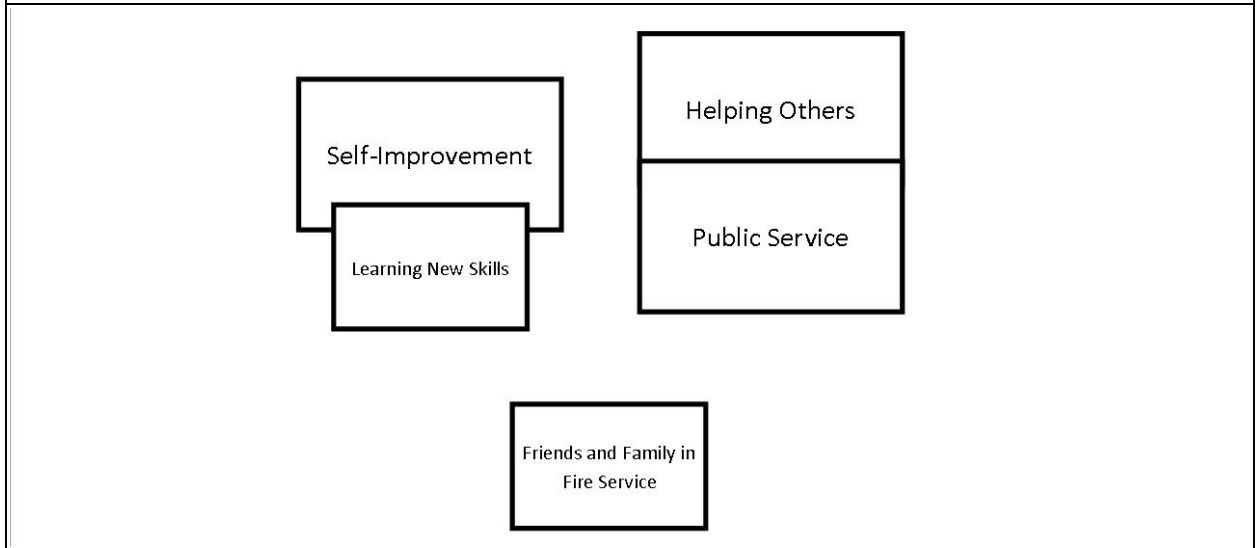
Note: This concept map represents actual data from snowball sample respondent 29 as an example of a respondent with an importance emphasis on career motives. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 4.7: Family Firefighter Motives to Join (t<sub>0</sub>) Concept Map**



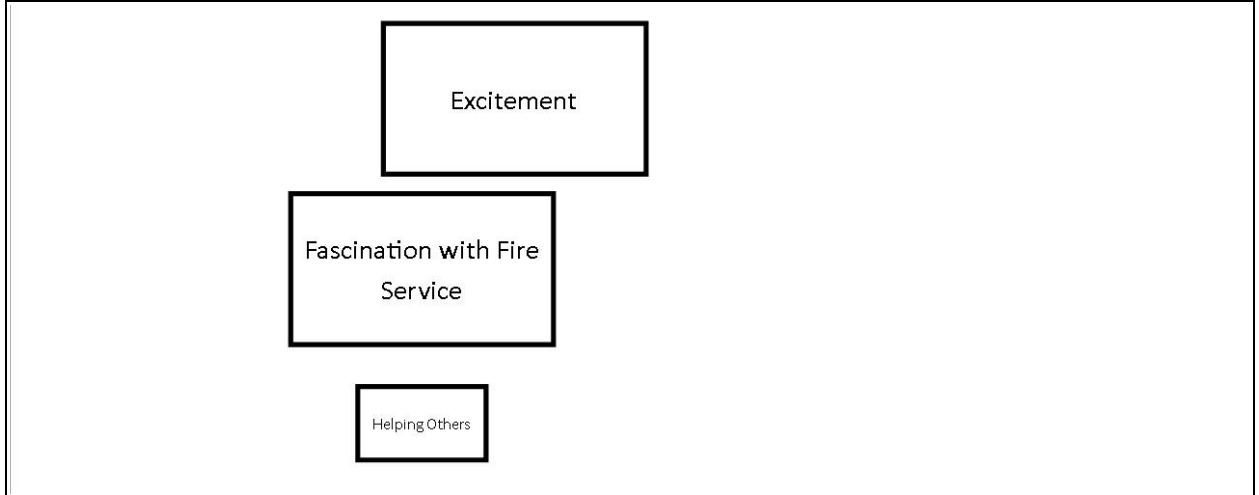
Note: This concept map represents actual data from snowball sample respondent 22 as an example of a family firefighter's motive map. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 4.8: Altruist Motives to Join (t<sub>0</sub>) Concept Map**



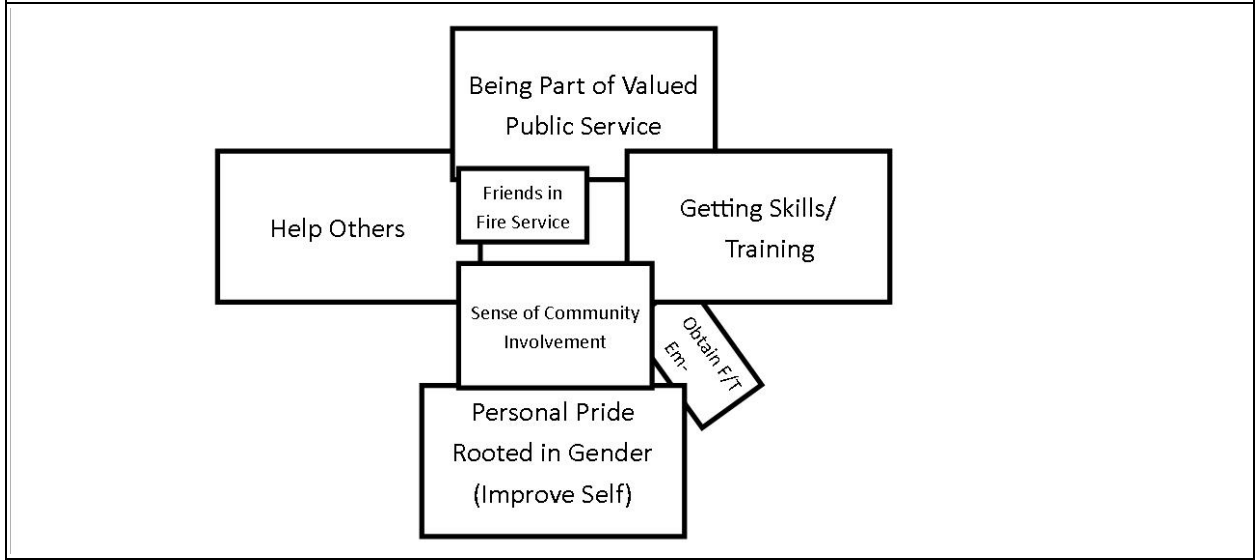
Note: This concept map represents actual data from snowball sample respondent 8 as an example of an altruist's motive map. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 4.9: Excitement/Risk Junkie Motives to Join (t<sub>0</sub>) Concept Map**



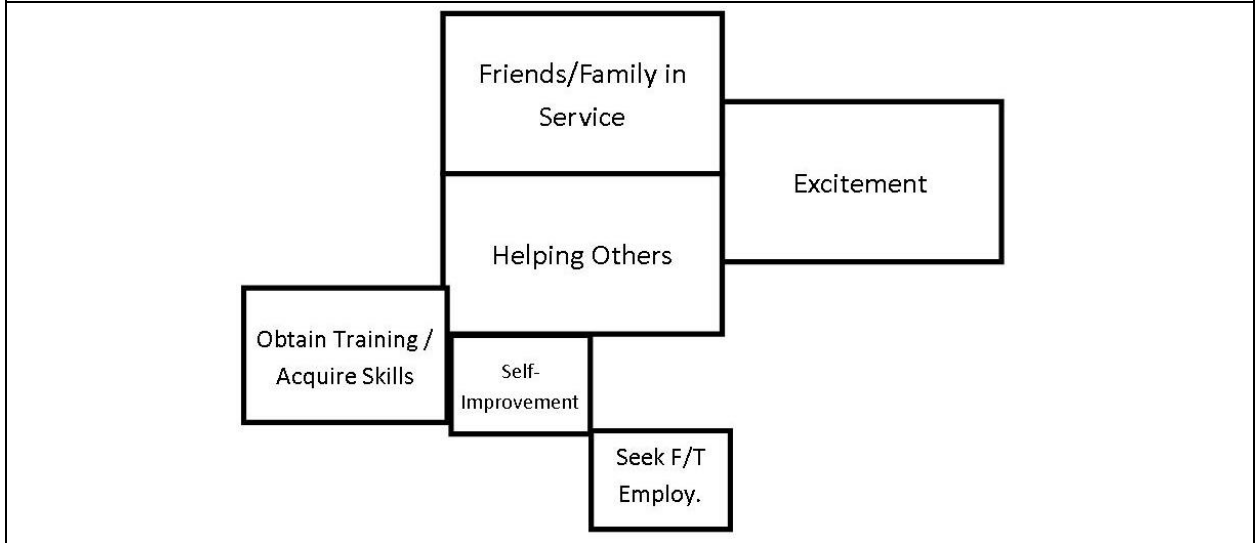
Note: This concept map represents actual data from snowball sample respondent 21 as an example of an excitement/risk junkie's motive map. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 4.10: Learner Motives to Join (t<sub>0</sub>) Concept Map**



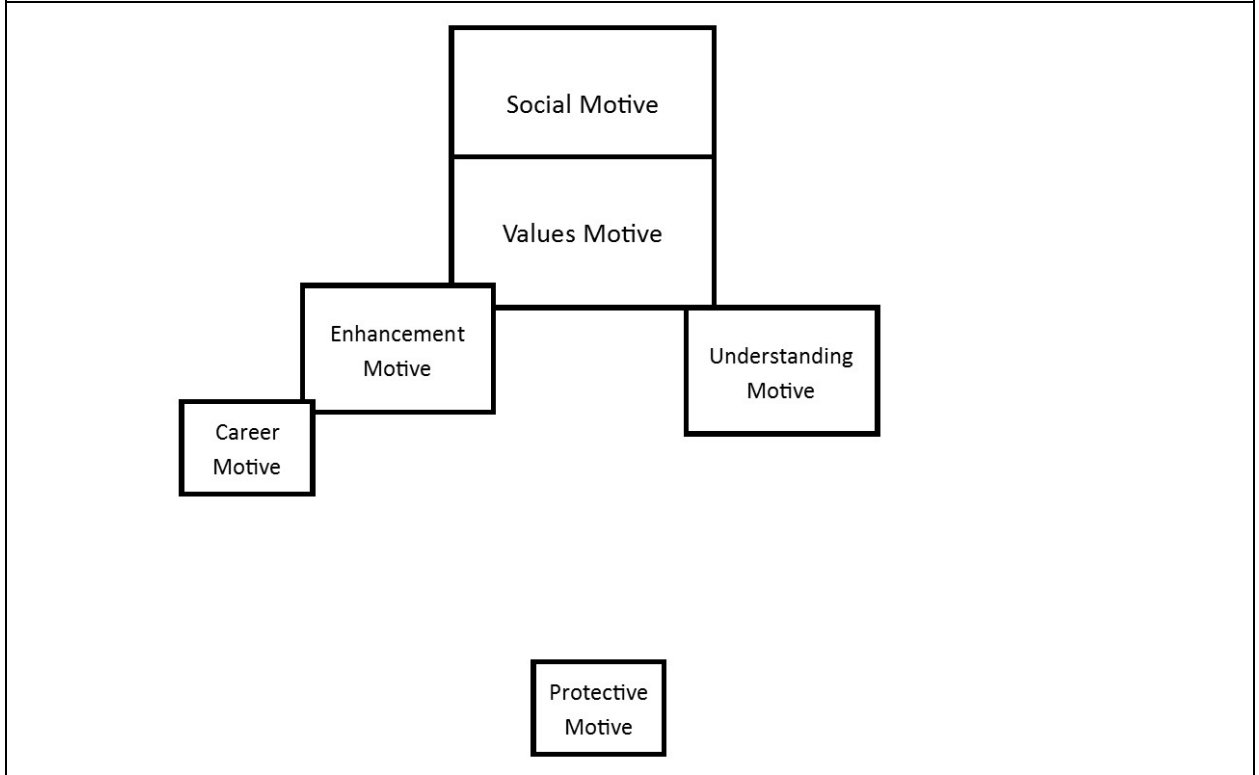
Note: This concept map represents actual data from snowball sample respondent 17a as an example of a learner's motive maps. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 4.11: Individual Qualitative Responses Aggregated Motive to Join (t<sub>0</sub>) Concept Map**



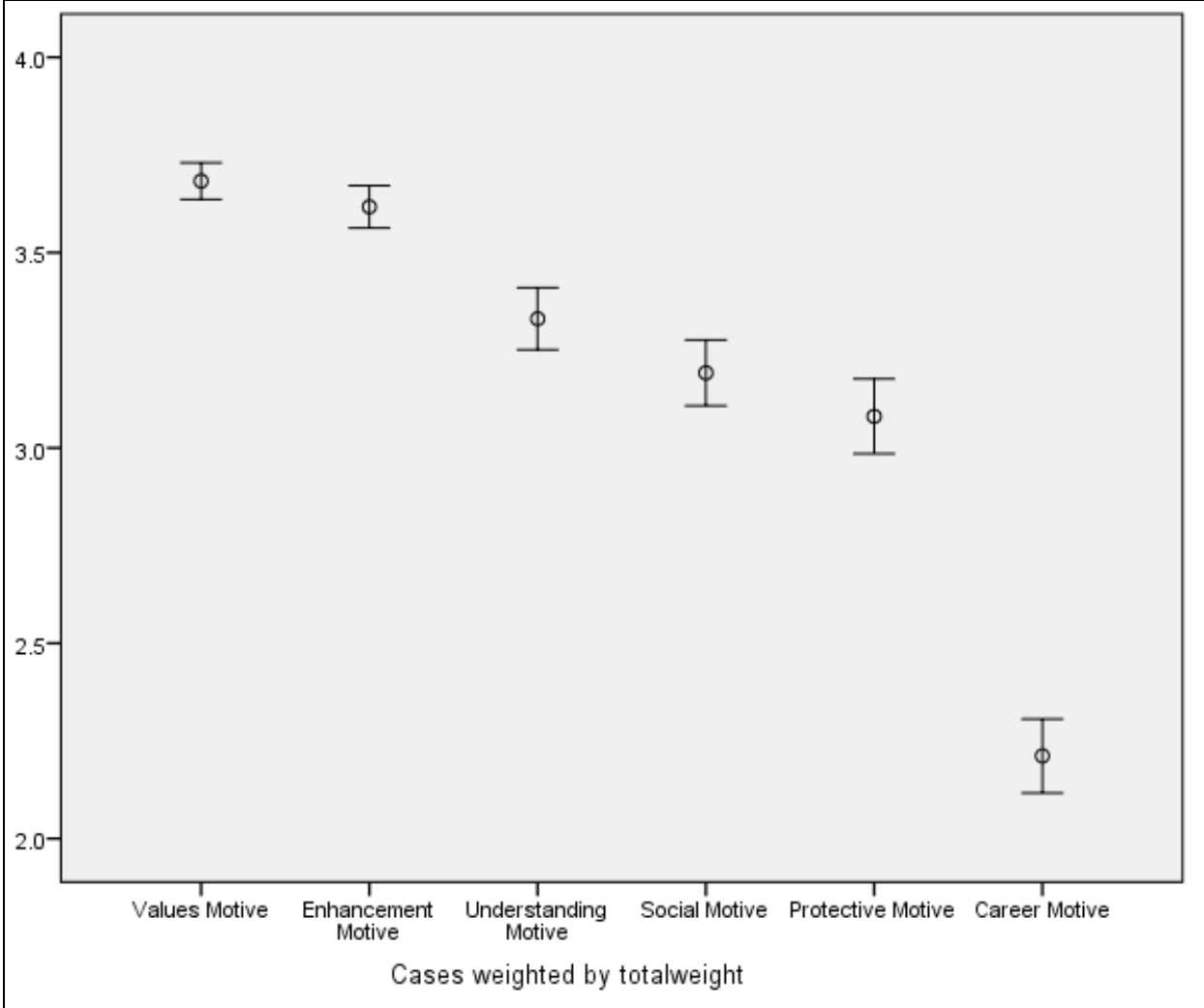
Note: This map is the aggregate of individual responses for motives to continue serving collected during interviews and concept mapping exercises from snowball sample respondents. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 4.12: Coded Qualitative Responses Aggregated Motive to Join (t<sub>0</sub>) Concept Map**



Note: This is the aggregate motive map with coded responses from the snowball sample respondents. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

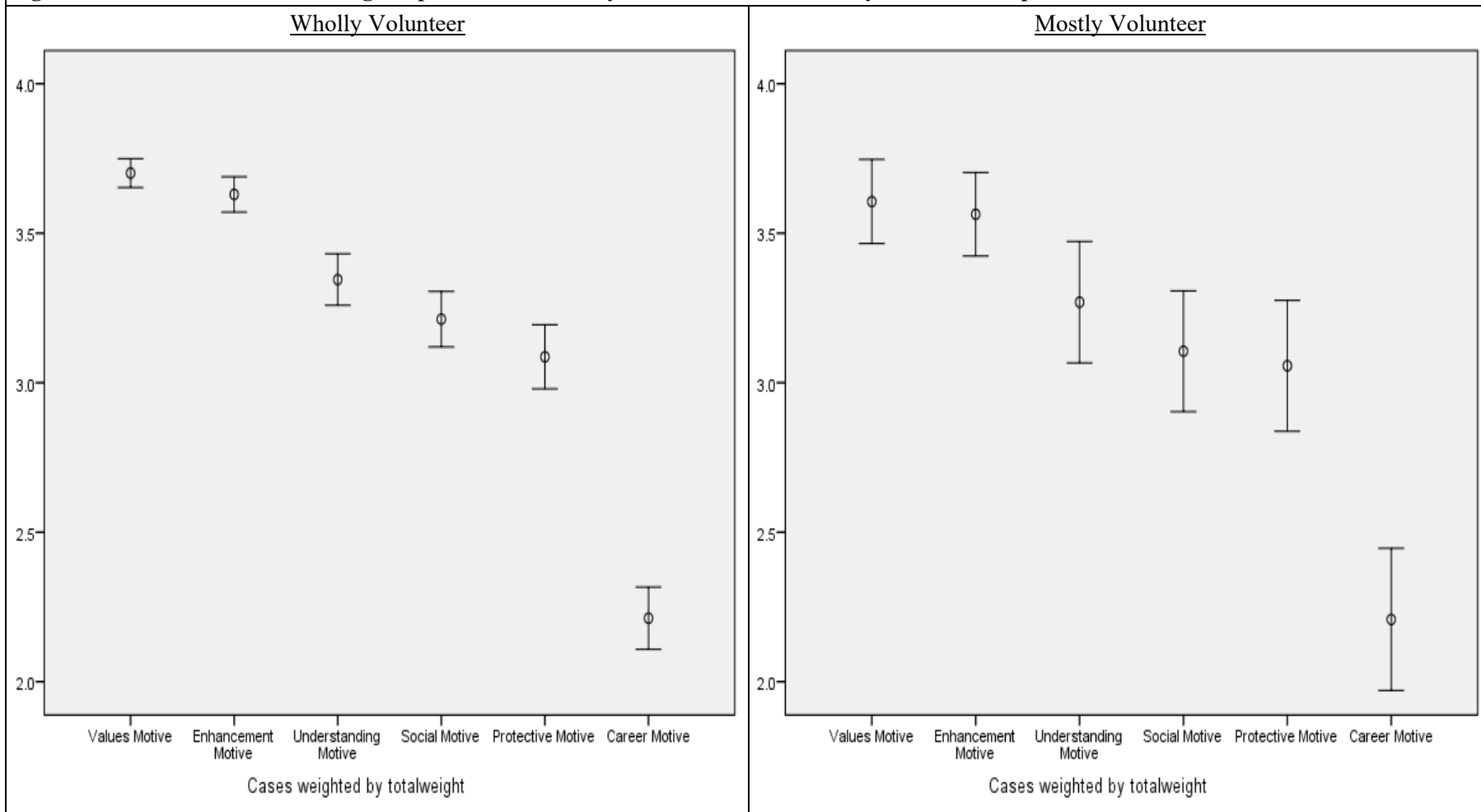
**Figure 4.13: Relative Importance of Motives to Join the Volunteer Fire Service in South Carolina**



Note: This error bar plot represents the motives to join quantitative results from the random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

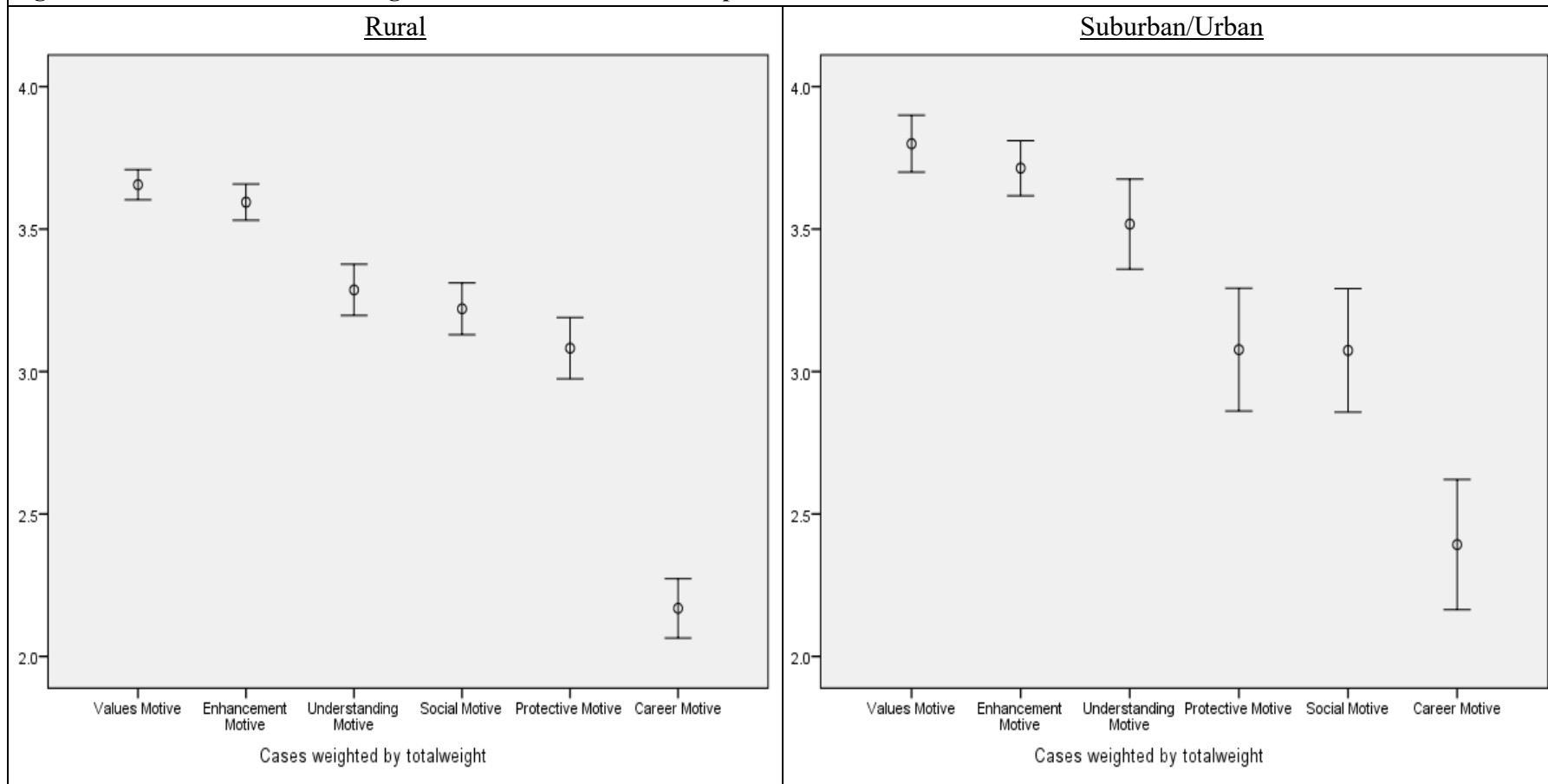


**Figure 4.14: Motives to Join among Respondents in Wholly Volunteer versus Mostly Volunteer Departments**



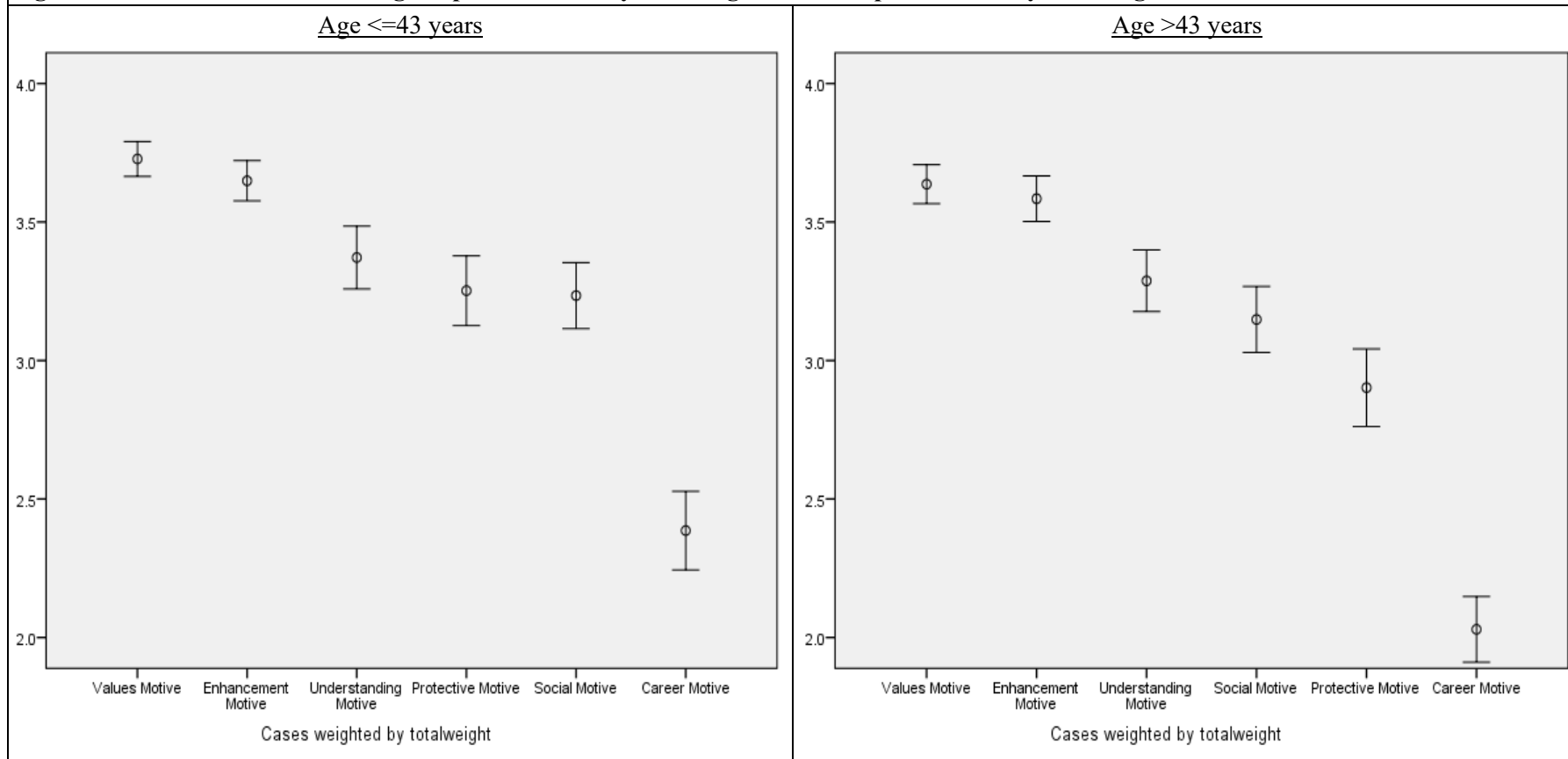
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Respondents in Wholly Volunteer Departments n = 106, respondents in Mostly Volunteer Departments n = 111. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 4.15: Motives to Join Among Rural, Suburban/ Urban Respondents**



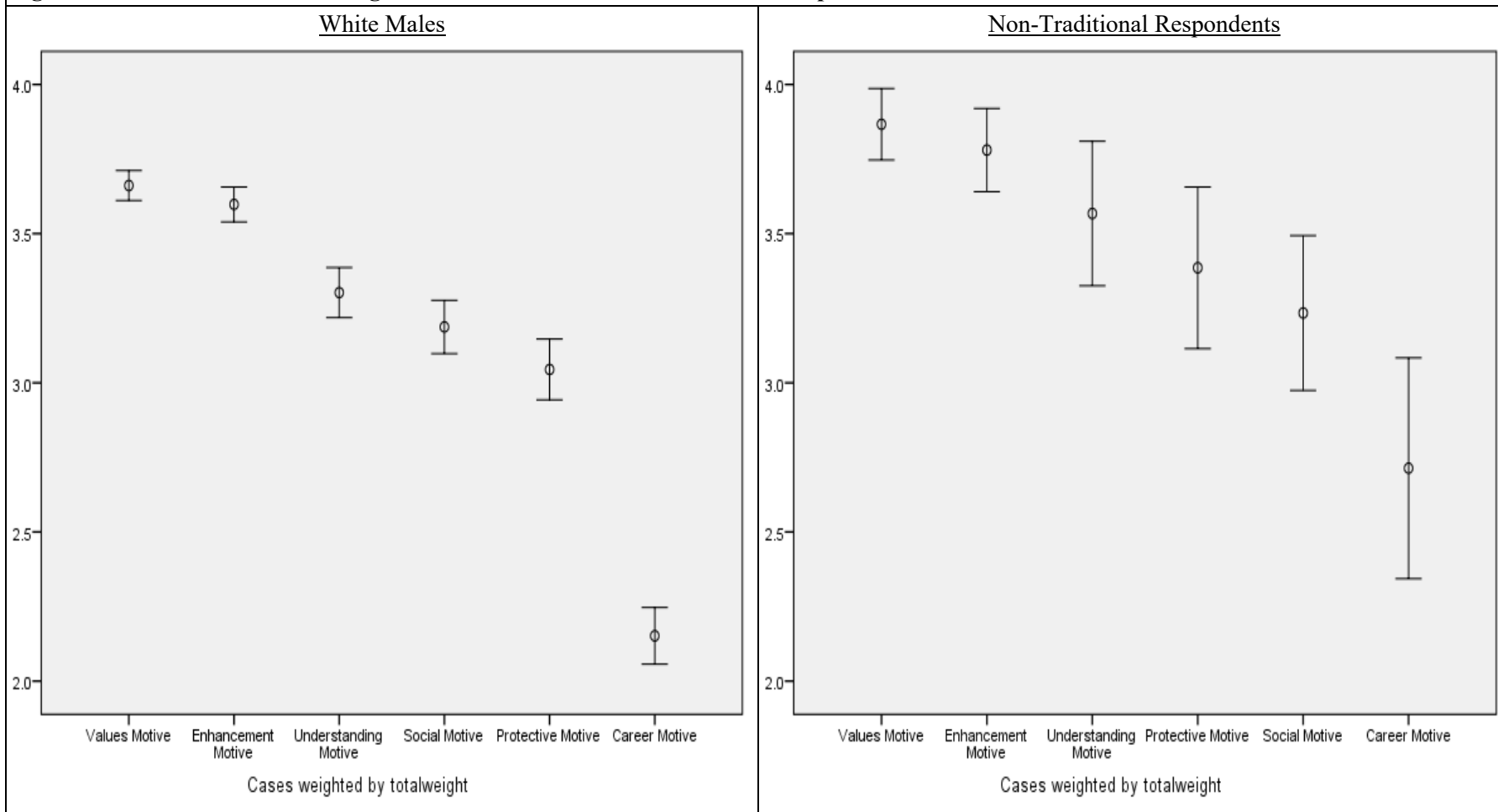
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Rural n = 158, Suburban/Urban n = 59,. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 4.16: Motives to Join Among Respondents ≤43 years of age versus Respondents >43 years of age**



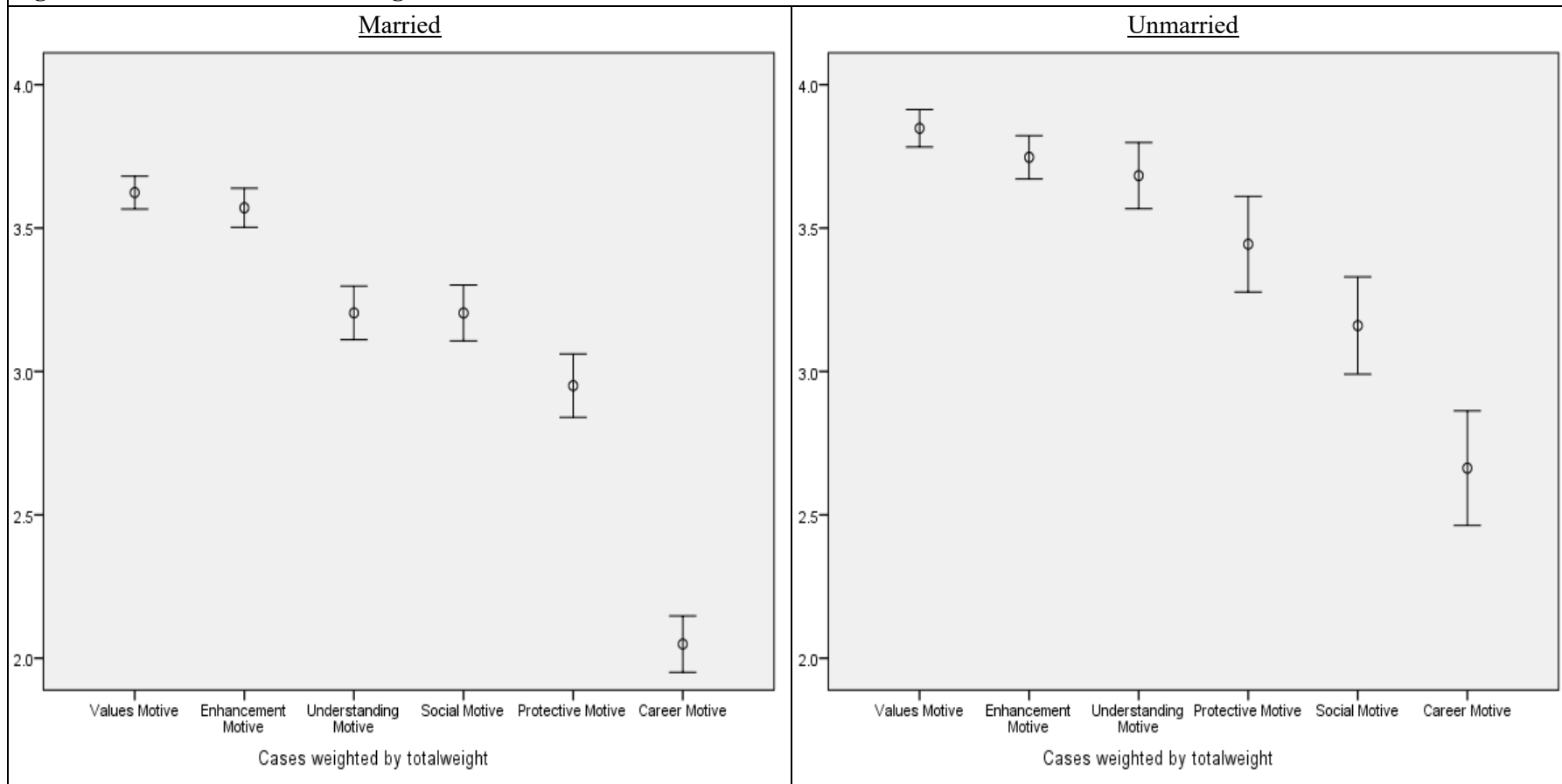
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Age ≤43 years = 120, Age >43 years = 97. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 4.17: Motives to Join among White Males versus Non-Traditional Respondents**



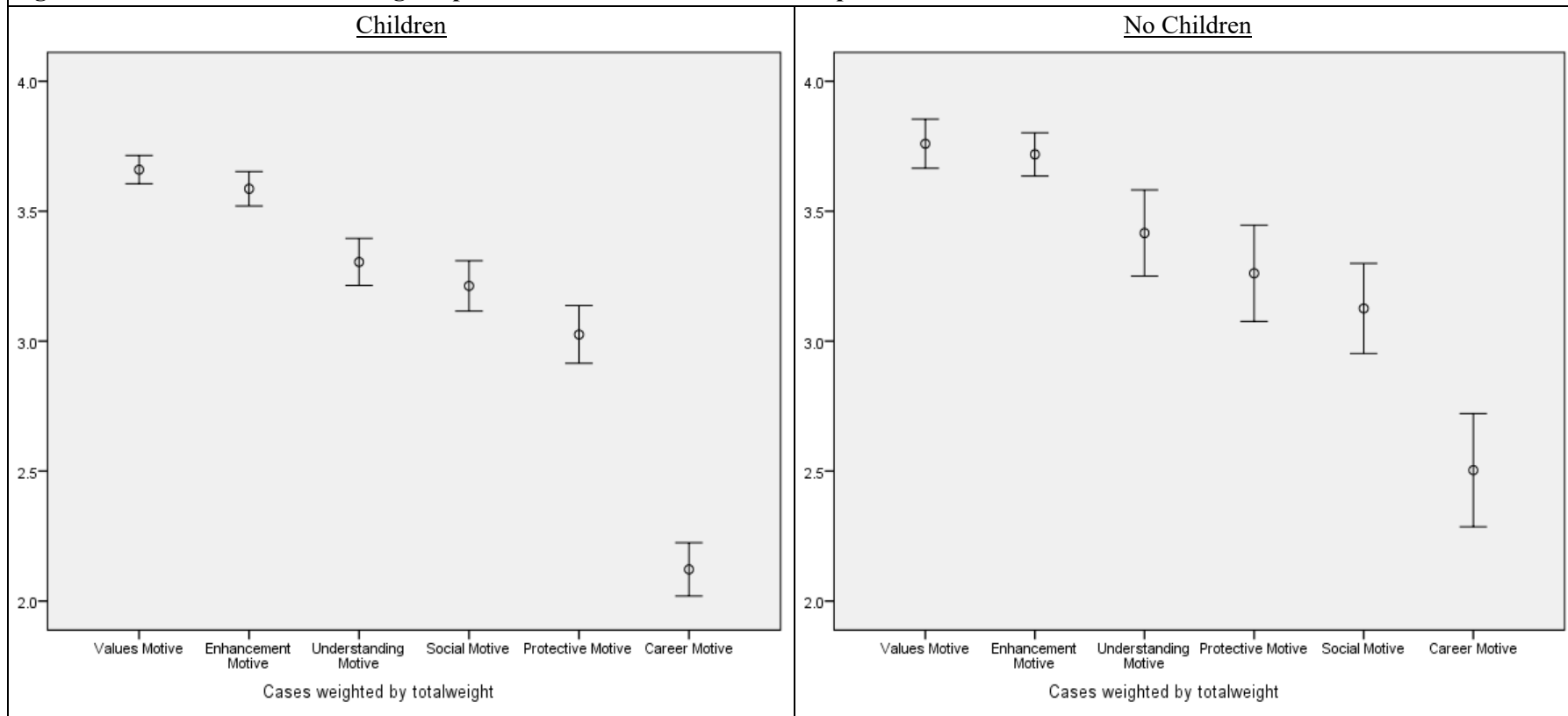
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. White male n = 161, respondents not white male n = 56. Confidence interval = 95%. Non-traditional respondents include any respondent that is not white and male. Mean values were weighted according to the appropriate population weights.

**Figure 4.18: Motives to Join Among Married versus Unmarried**



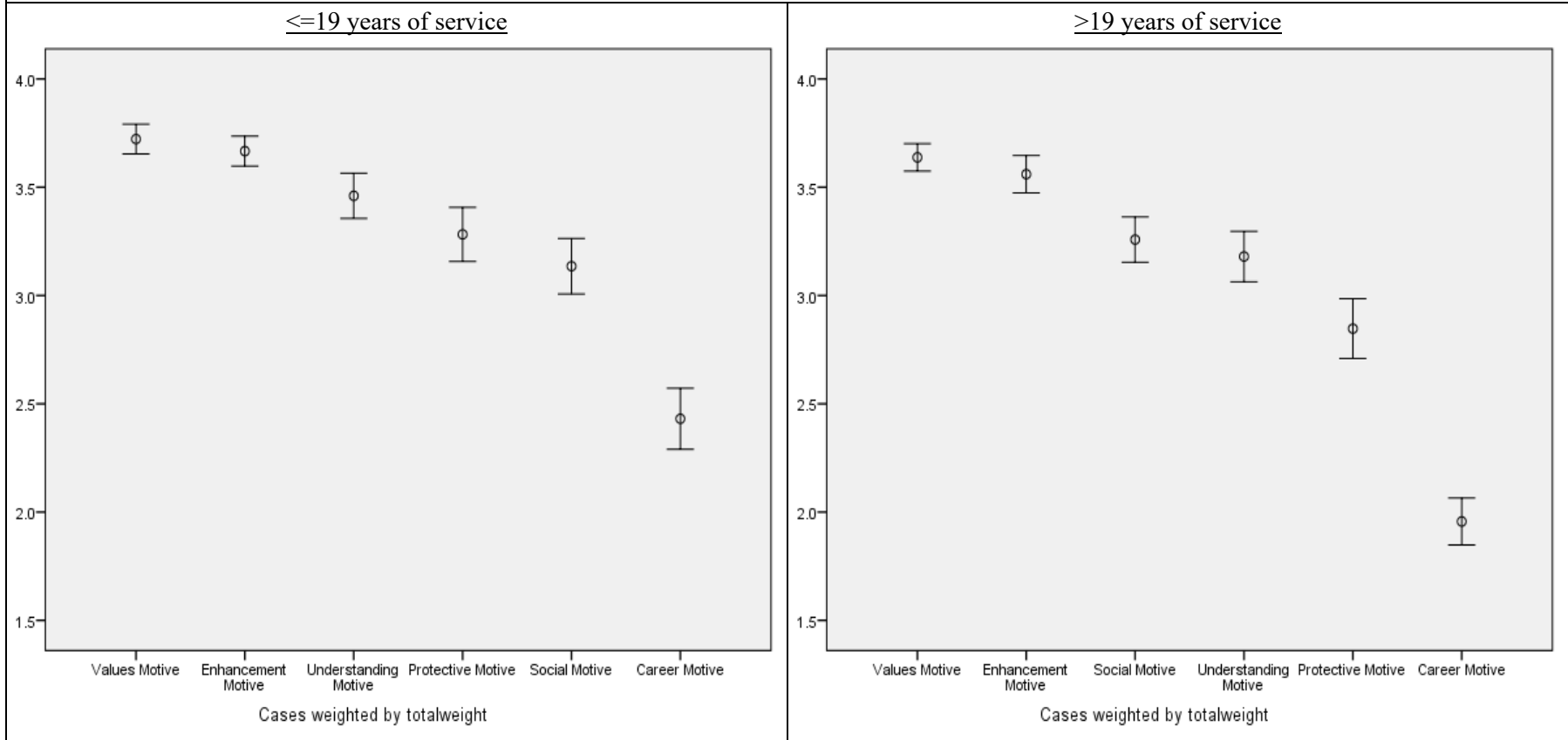
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Married n = 154, unmarried n = 63. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 4.19: Motives to Join Among Respondents with Children versus Respondents without Children**



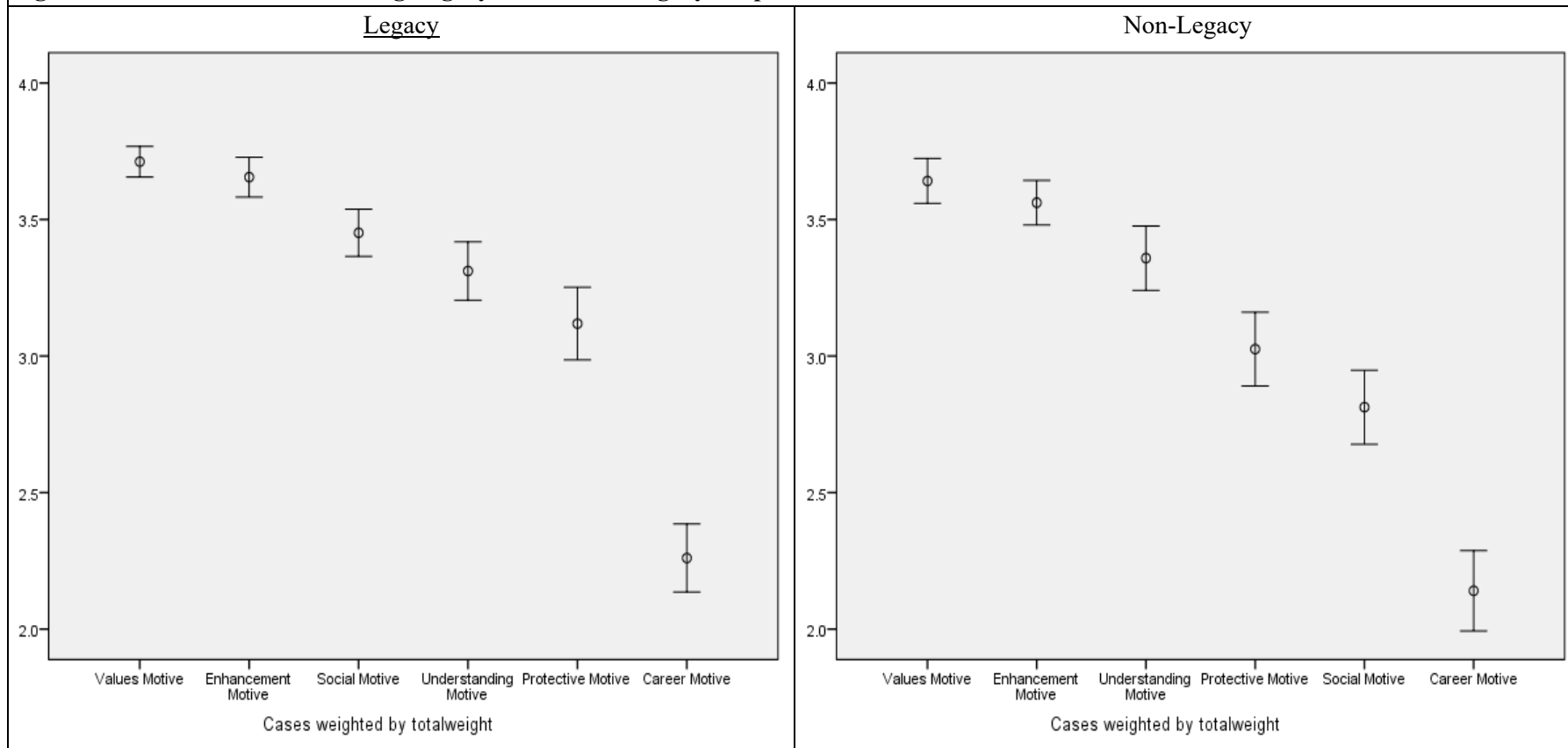
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Respondents with Children n = 161, Respondents without Children n = 56. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 4.20: Motives to Join Among Respondents with  $\leq 19$  years of service versus those with  $> 19$  years of service**



Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Respondents with  $\leq 19$  years of service n = 129, Respondents with  $> 19$  years of service n = 88. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

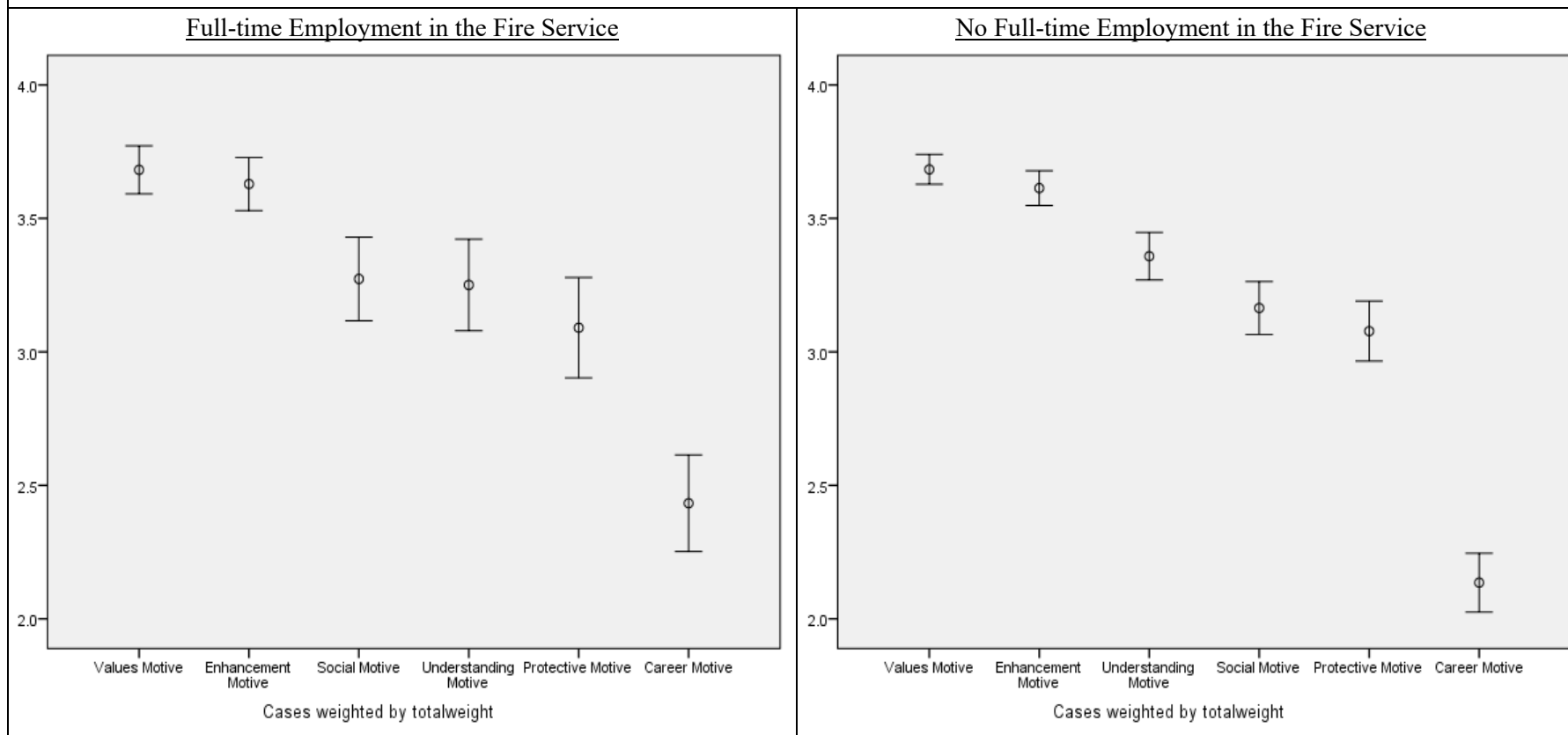
**Figure 4.21: Motives to Join Among Legacy versus Non-Legacy Respondents**



Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Legacy n = 125, Non-legacy n = 92. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

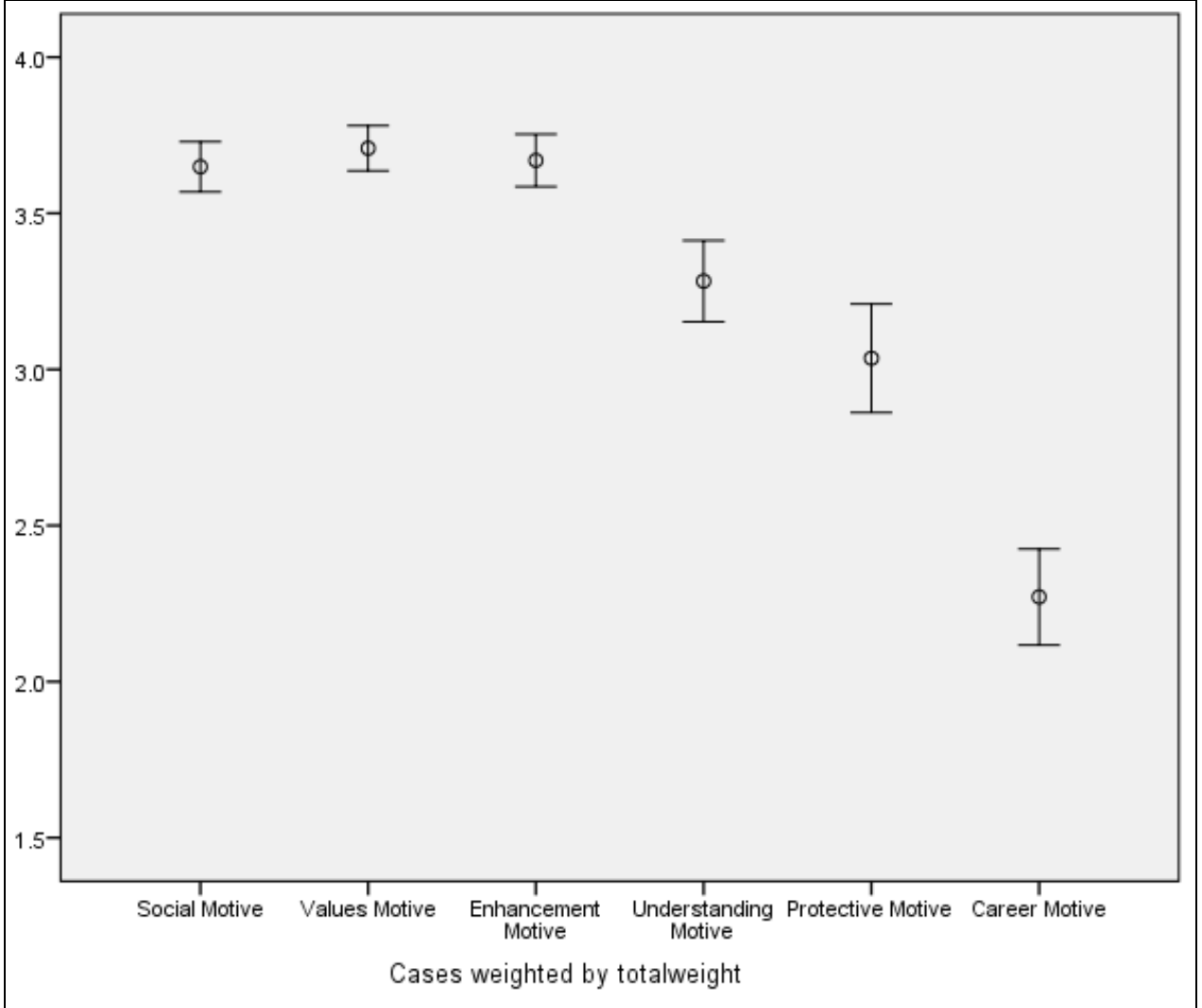


**Figure 4.22: Motives to Join Among Respondents with Full-time Employment in the Fire Service versus those without Full-time Employment in the Fire Service**



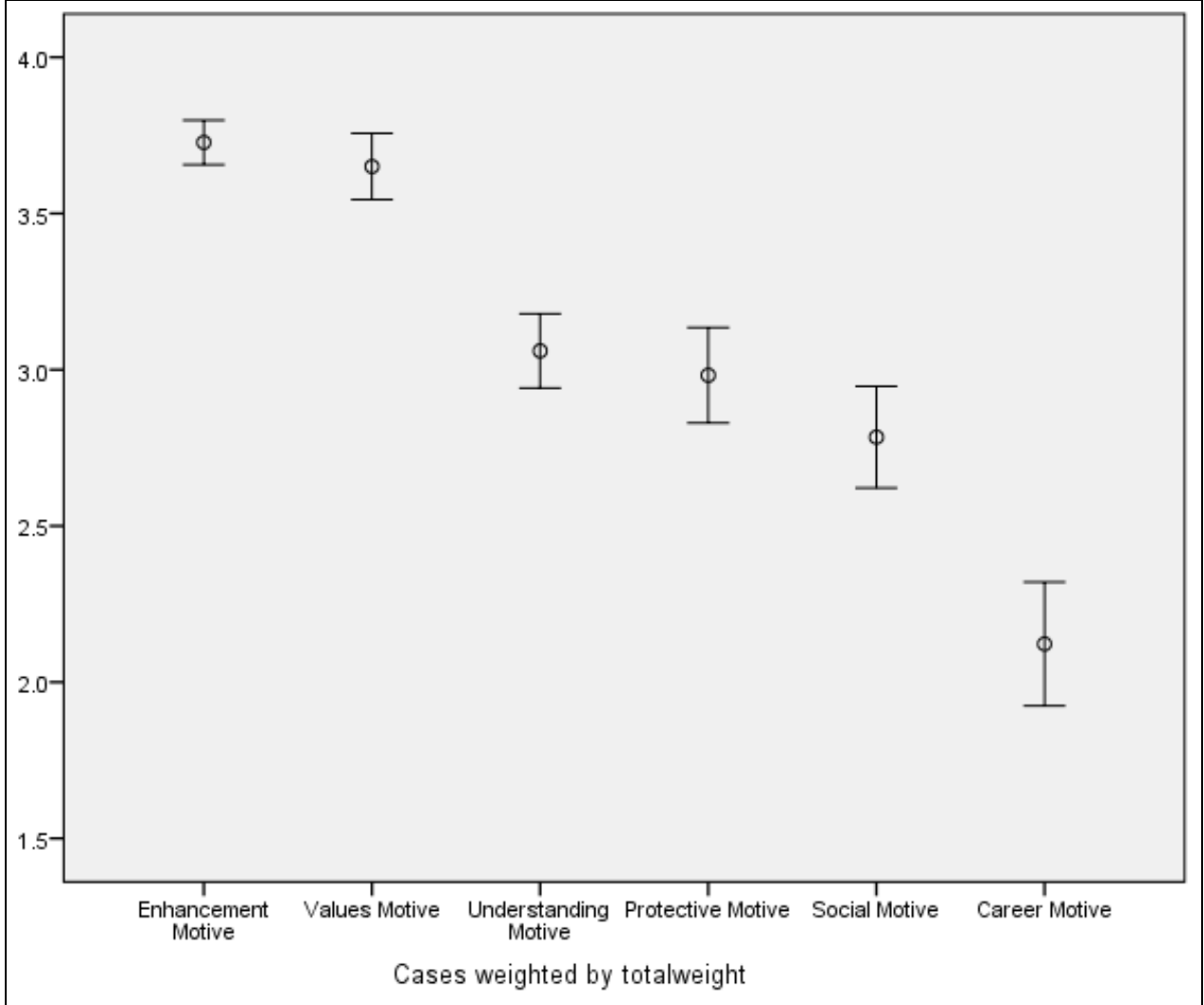
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Full-time employment in Fire Service n = 63, No Full-time employment in Fire Service n = 154. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 4.23: Motives to Join for Family Firefighter Category of Joiner**



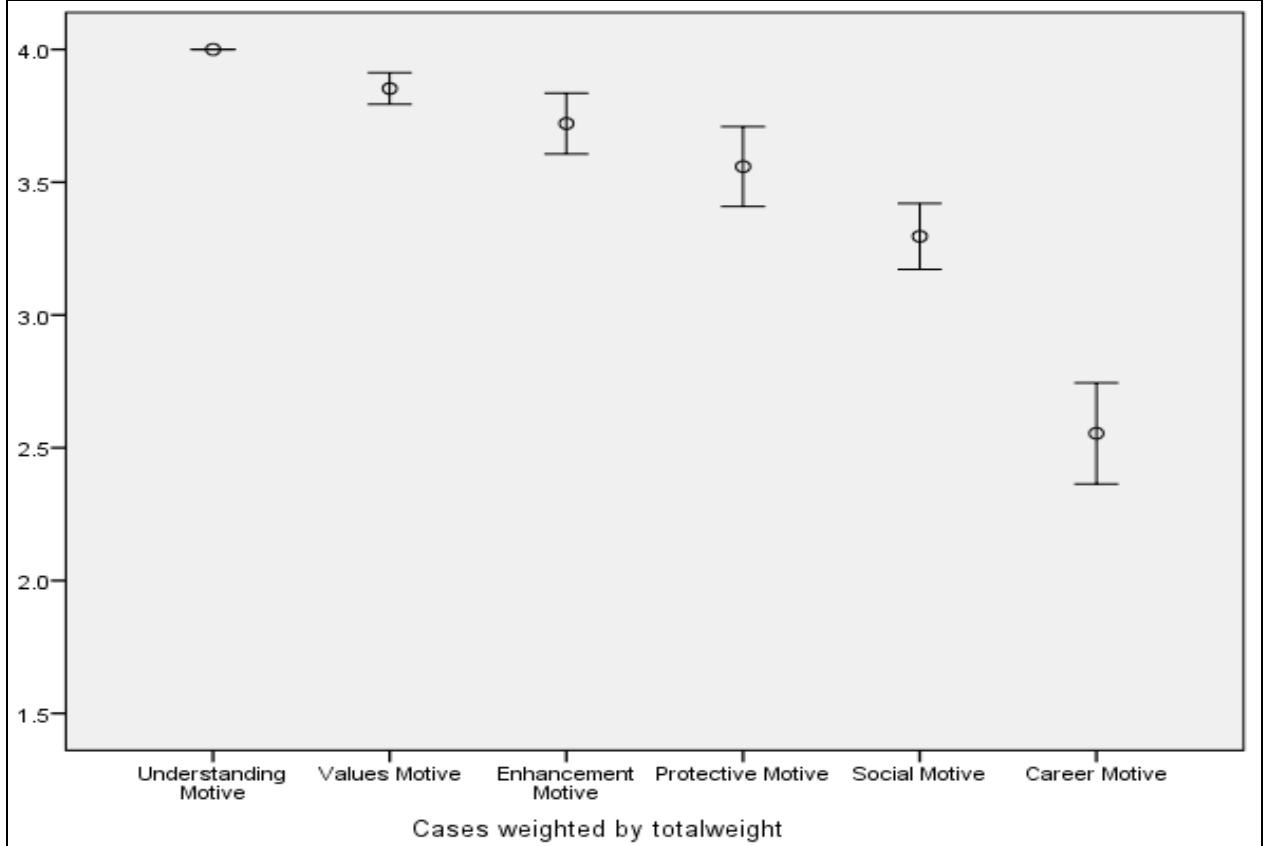
Note: n = 85. This error bar plot represents the motives to join quantitative results from the random sample respondents, family firefighter category of joiner subset. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 4.24: Motives to Join for Excitement/Risk Junkie Category of Joiner**



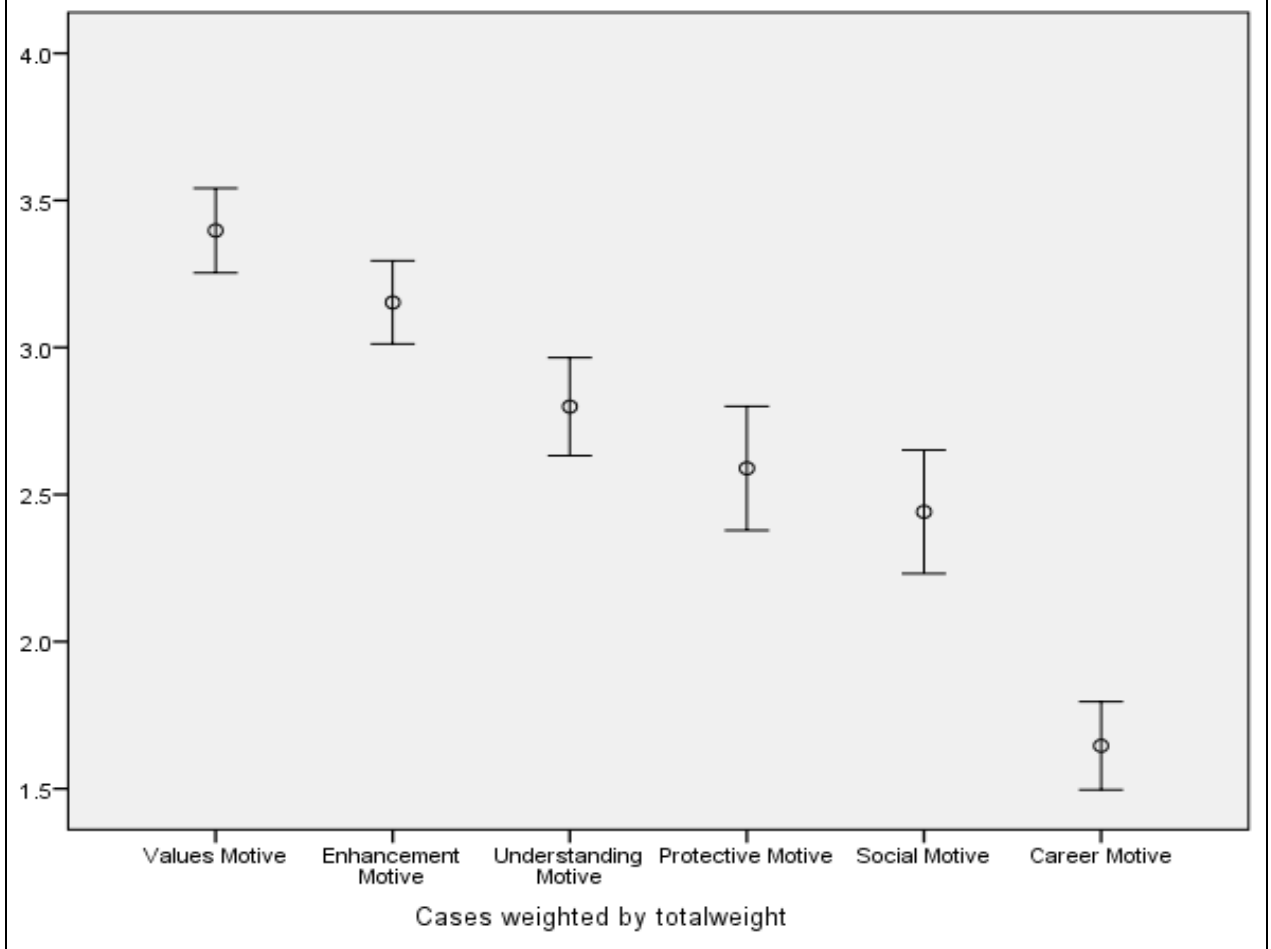
Note: n = 45. This error bar plot represents the motives to join quantitative results from the random sample respondents, excitement/risk junkie category of joiner subset. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 4.25: Motives to Join for Learner Category of Joiner**



Note: n = 47. This error bar plot represents the motives to join quantitative results from the random sample respondents, learner category of joiner subset. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 4.26: Motives to Join for Altruist Category of Joiner**



Note: This error bar plot represents the motives to join quantitative results from the random sample respondents, altruist category of joiner subset. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 40. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Table 4.1: Qualitative / Quantitative Sample Comparison**

<u>Sample Component</u>	<u>Qualitative Sample</u>	<u>Quantitative Sample</u>
Sample Size	25	217
Respondent Gender		
	Male 88% (22)	82.5% (179)
	Female 12% (3)	17.5% (38)
Respondent Race		
	White 92% (23)	90.3% (196)
	Black or African American 8% (2)	6.4% (14)
	From Multiple Races	2.8% (6)
	Native Hawaiian or other Pacific Islander	0.5% (1)
Respondent Mean Age	42 years	42.8 years
Respondent Marital Status		
	Married 68% (17)	71.0% (154)
	Not Married 32% (8)	29.0% (63)
Respondent Children Status		
	Children 76% (19)	74.2% (161)
	No Children 24% (6)	25.8% (56)
Respondent Department Types		
	Wholly Volunteer 60% (15)	48.8% (106)
	Mostly Volunteer 40% (10)	51.2% (111)
Respondent Mean Years of Service	18.6 years	17.3 years
Respondent Family History of Firefighting		
	Yes 60% (15)	57.6% (125)
	No 40% (10)	42.4% (92)
Respondent Service Type (Continuous / Intermittent)		
	Continuous 88% (22)	86.2% (187)
	Intermittent 12% (3)	13.8% (30)

Note: Qualitative sample was derived from snowball sampling (non-probability) methods. Quantitative sample was derived from unrestricted random stratified (probability) methods. Numbers in parentheses represent actual number of respondents for each category.

**Table 4.2: Clary, et al. (1998) Factor and Qualitative Individual Responses**

<u>Category</u>	<u>Individual Response</u>
Values	Helping Others
	Payback the Community
	Sense of Civic Responsibility
	Reciprocal Service
Enhancement	Excitement
	Being Part of Valued Public Service
	Self-Improvement
	Pride
Understanding	Help Me Mature Faster
	Acquiring/Applying New Skills
	Obtaining Training
Social	Family/Friends in Service
	Fellowship/Brotherhood
	Sense of Belonging
	Family Tradition of Volunteering (Non-Fire Department Related)
Protective	Having Resources Others Do Not
Career	Seeking Full-Time Employment
	Money
Miscellaneous	Sofa Super Store Fire
	Fascination with the Fire Service
	Use Time Wisely, Be Productive
	Working with Others Toward a Common Goal

Note: Individual responses were included if one or more snowball sample respondents indicated the factor was important. Clary, et al. (1998) factors were established in the literature review. Individual responses were from the snowball sample interviews and motive concept maps.

**Table 4.3: Clary, et al. (1998) Factors and Associated Response Item**

<u>Clary, et al. (1998) Factors</u>	<u>Individual Response</u>
Values	Civic responsibility
Values	Helping others
Values	Serving as role model
Enhancement	Excitement
Enhancement	Being a member of a valued public service
Enhancement	Feeling of accomplishment
Understanding	Obtaining training
Understanding	Acquiring skills
Social	Acquaintance
Social	Close friend/family member
Social	Fellowship
Protective	Payback the community for own successes
Protective	Possessing sufficient resources to volunteer
Career	Gaining employment
Career	Supplemental income
Career	Networking with community and business leaders

Note: Individual responses were used as prompts in the survey instrument and were pre-coded to Clary, et al. (1998) factors prior to distribution of the survey instrument. The qualitative results informed the coding necessary for each individual response prior to the quantitative analysis.



<b>Table 4.4: Individual Quantitative Motive Importance Responses</b>						
	<u>Motive to Join</u>	<u>Factor</u>	<u>Min.</u>	<u>Max.</u>	<u>Mean</u>	<u>Std. Dev.</u>
	Helping others	Values	3	4	3.93	0.262
	Civic responsibility	Values	1	4	3.80	0.449
	Being a member of a valued public service	Enhancement	1	4	3.66	0.550
	Feeling of accomplishment	Enhancement	1	4	3.61	0.634
	Excitement	Enhancement	1	4	3.58	0.695
	Fellowship	Social	2	4	3.55	0.628
	Obtaining training	Understanding	1	4	3.52	0.673
	Serving as role model	Values	1	4	3.32	0.851
	Possessing sufficient resources to volunteer	Protective	1	4	3.16	0.927
	Acquiring skills	Understanding	1	4	3.14	0.891
	Close friend/family member	Social	1	4	3.04	1.097
	Payback the community for own successes	Protective	1	4	3.00	0.958
	Acquaintance	Social	1	4	2.98	1.087
	Networking with community and business leaders	Career	1	4	2.69	0.981
	Gaining employment	Career	1	4	2.29	1.119
	Supplemental income	Career	1	4	1.66	1.000

Note: n = 217. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. Results are from random sample respondents completing survey instrument. Mean values were weighted according to the appropriate population weights.

**Table 4.5: Quantitative Survey Responses by Clary, et al. (1998) Factor**

<u>Clary, et al. Factor</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Mean</u>	<u>Std. Dev.</u>
Values	1.67	4.00	3.68	.385
Enhancement	1.67	4.00	3.62	.446
Understanding	1.00	4.00	3.33	.647
Social	1.33	4.00	3.19	.686
Protective	1.00	4.00	3.08	.783
Career	1.00	4.00	2.21	.775

Note: n=217. Score of 1 = Not Important, 2 = Low Importance, 3 = Moderate Importance, 4 = High Importance. Results are from random sample respondents completing survey instrument. Mean values were weighted according to the appropriate population weights.

<u>Control</u>	<u>n</u>	<u>Values</u> <u>Motives</u>	<u>Understanding</u> <u>Motives</u>	<u>Career</u> <u>Motives</u>	<u>Social</u> <u>Motives</u>	<u>Protective</u> <u>Motives</u>	<u>Enhancement</u> <u>Motives</u>
Mostly volunteer dept	111	3.61	3.30	2.23	3.11	3.11	3.56
Wholly volunteer dept	106	3.72	3.33	2.21	3.21	3.12	3.63
Rural pop. served	158	3.64	3.28	2.16	3.16	3.10	<b><u>3.55</u></b>
Suburban/urban pop. served	59	3.73	3.39	2.40	3.17	3.16	<b><u>3.70</u></b>

Note: A score of 0 = Not Important, 1 = Low Importance, 2 = Moderate Importance, 3 = High Importance.  
 Bolded/Underlined scores represent statistically significant difference of means. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.

**Table 4.7: Quantitative Motive Importance by Demographic Control Variable**

<u>Control</u>	<u>n</u>	<u>Values</u> <u>Motives</u>	<u>Understanding</u> <u>Motives</u>	<u>Career</u> <u>Motives</u>	<u>Social</u> <u>Motives</u>	<u>Protective</u> <u>Motives</u>	<u>Enhancement</u> <u>Motives</u>
Age <= 43	120	3.71	3.33	<b><u>2.38</u></b>	3.21	<b><u>3.26</u></b>	3.62
Age >43	97	3.62	3.29	<b><u>2.03</u></b>	3.11	<b><u>2.94</u></b>	3.56
Traditional (White male)	161	<b><u>3.63</u></b>	3.28	<b><u>2.15</u></b>	3.15	<b><u>3.03</u></b>	3.58
Non-traditional	56	<b><u>3.77</u></b>	3.40	<b><u>2.43</u></b>	3.21	<b><u>3.37</u></b>	3.64
Marital status married	154	<b><u>3.60</u></b>	<b><u>3.21</u></b>	<b><u>2.08</u></b>	3.16	<b><u>3.00</u></b>	<b><u>3.54</u></b>
Marital status unmarried	63	<b><u>3.83</u></b>	<b><u>3.55</u></b>	<b><u>2.58</u></b>	3.16	<b><u>3.40</u></b>	<b><u>3.74</u></b>
Children	161	3.65	3.27	<b><u>2.13</u></b>	3.16	<b><u>3.05</u></b>	3.57
No children	56	3.72	3.42	<b><u>2.49</u></b>	3.17	<b><u>3.30</u></b>	3.67
Years of service <= 19	129	3.69	3.38	<b><u>2.37</u></b>	3.12	<b><u>3.26</u></b>	3.63
Years of service >19	88	3.63	3.20	<b><u>2.01</u></b>	3.22	<b><u>2.91</u></b>	3.54
Legacy Firefighter	125	3.71	3.34	2.31	<b><u>3.42</u></b>	3.16	3.61
Non-legacy Firefighter	92	3.61	3.27	2.11	<b><u>2.81</u></b>	3.06	3.57
Continuous service	187	3.68	3.33	2.25	3.20	3.15	3.59
Intermittent service	30	3.59	3.22	2.08	2.93	2.90	3.62
FTE in fire service	63	3.66	3.29	<b><u>2.42</u></b>	3.27	3.14	3.62
No FTE in fire service	154	3.67	3.32	<b><u>2.14</u></b>	3.12	3.11	3.58

Note: A score of 0 = Not Important, 1 = Low Importance, 2 = Moderate Importance, 3 = High Importance. Bolded/Underlined scores represent statistically significant difference of means. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.

## CHAPTER V

### UNDERSTANDING VOLUNTEER FIREFIGHTERS' EXPECTATIONS TO CONTINUE SERVICE

Chapter 4 revealed the motives to join among volunteer firefighters. Although this is important, particularly to recruitment efforts, understanding motives to join is not useful without understanding how different factors contribute to volunteers' continued service. This chapter will analyze volunteers' expectations to continue service. As my theoretical framework suggests, motives to join may be substantively different from expectations to continue service. Plainly, what brings a volunteer to the fire service may not be what keeps them there. Therefore, studying expectations to continue service separately is essential to understanding the overall problem of declining numbers of volunteer firefighters.

#### **Qualitative Approach to Understanding Firefighters' Expectations to Serve**

The snowball sample, used with the qualitative methods, produced two groups of respondents. Those with two years and less of service did not participate in the second qualitative mapping exercise on expectations. Respondents with less than two years of service lacked the maturation to respond adequately to expectation to continue service prompts. Therefore, only respondents with more than two years of experience participated in the expectations exercise.

The qualitative approach to expectations was an extension of the motive study. The interview with snowball sample respondents continued with another set of questions regarding what has kept the respondent continuing to serve. These interview questions served to inform the

construction of an expectation concept map. The expectation concept maps represented present time and were labeled as time  $n$  ( $t_n$ ) with  $n$  equal to the number of years of service that the respondent possessed. The expectation maps focused on what kept the respondent engaged in continued service and not what influenced their decision to join.

### *Individual Responses*

Like the preceding motive concept maps, snowball sample respondents were not bound by the six Clary et al. (1998) factors during the construction of their expectation maps. I eliminated the constraint of the rigid categories and had the respondent construct their expectation map separately from a blank concept space. I reviewed any motives to join not included in the expectation map with each respondent to insure that they did not inadvertently omit anything from the expectation maps. Like the motive analysis, the individual expectation responses were coded to the Clary et al. (1998) framework. The coding used for expectations was similar to that used for motives to join and is outlined in Table 5.1.

### *Values Expectations*

Values expectations to continue service included *helping others*<sup>8</sup>, *a sense of civic responsibility*, *paying back the community*, *teaching children about helping others*, *helping others in the department*, and *reciprocal service*. Values motives to join were highly important but a few became even more important among respondents as expectations to continue their service. As an expectation to continue serving, most snowball respondents reported *helping others* as highly important with very few exceptions. This represents a large increase from its importance as a motive to join and illustrates its increase in importance because of service among the snowball sample. *A sense of civic responsibility* was also highly important as an expectation to continue service among the snowball sample indicating an increase over its importance as a motive to join. Fewer snowball respondents reported *payback to the community* expectation as highly important to continue service when compared to the same response as a motive to join. Two snowball

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<sup>8</sup> Like Chapter 4, individual expectation responses are italicized for easier identification

respondents reported *teaching children about helping others* as a highly important expectation to continue service. This particular response was synonymous with *servicing as a role model* for others and emerged as an expectation after being absent from the motive analysis. A single snowball respondent reported *helping other members of the department* by teaching or providing training. Although *helping other members of the department* was highly important to this respondent, no other snowball respondent reported it as an expectation to continue service and no respondents reported it as a motive to join. Like the qualitative motive analysis, conclusions cannot be based upon the results of this small, non-probability sample, but it is clear that respondents' values expectations are focused upon the idea of making contributions to their communities and in some cases their fellow firefighters.

Volunteer firefighters make significant sacrifices in the forms of time, commitment, and money. Occasionally, volunteer firefighters also make the ultimate sacrifice and lose their lives while serving. It is hard to imagine anyone serving as a volunteer firefighter without placing importance on *helping others*. Nevertheless, these qualitative results begin to demonstrate just how important the opportunity to help others is. Volunteer firefighters probably do not fully understand the concept of *helping others* as a motive to join, like most motives. Many may join the fire service because when there is a fire, people simply show up to the fire and stay until the fire goes out. Prospective volunteers may think of this as helping others prior to joining. A volunteer firefighter cannot fully understand the full measure of dedication and sacrifice required to serve until they serve for some time.

*Civic responsibility* is another factor that volunteer firefighters understand better as an expectation to continue service rather than as a motive to join. As snowball respondents described, *civic responsibility* is a feeling that if they do not serve in the volunteer fire service, no one will. Volunteers likely underappreciate this concept of freeriding at the recruitment stage and do not fully appreciate it until the service stage. This qualitative expectation analysis suggests this assumption is correct. Only one snowball respondent reported *civic responsibility* as a highly

important motive to join, but snowball respondents reported the same factor highly important with a much higher frequency; clearly volunteers learned something about *civic responsibility* through their efforts in the fire service. *Payback to the community*, on the other hand, declined slightly in reported importance from motive to expectation. The final values related expectation was *helping others* in the department.

The motive analysis examined snowball respondent eight that placed emphasis on values factors above others as motives to join. Figure 5.1 illustrates the motive/expectation concept map comparison for respondent eight.

Figure 5.1 suggests that respondent eight has changed somewhat during service. First, respondent eight's expectation map became tighter and overlapping. *Helping others*, a values factor, was highly important as a motive to join and as an expectation to continue service. The factor card was placed high in both the motive and expectation maps signaling its importance at both the recruitment and retention stages. At the recruitment stage; however, *helping others*, a values motive, was in a separate tier and related only to public service. *Self-improvement*, an enhancement motive, was in a separate tier and related to *learning new skills*. This signified a separation between altruism, represented by the values motives, and self-interest, represented by enhancement motives. After eight years of service, respondent eight's expectation map provides a perfect example to reinforce the work of Rogers (1951) and Maslow (1950), who suggested that altruism and self-interest are related and convergent. As an expectation to continue service, *public service* has transformed into *being part of a valued public service*. Chapter 4 outlined that these are different. *Public service*, like *helping others*, is concerned with altruism. *Being part of a valued public service* is about personal membership; related more to enhancement, or benefits to the individual. *Helping others* and *being part of a valued public service*, values and enhancement expectations respectively, are overlapping and are the foundation from which other expectations emerged. *Helping others*, in a tier of high importance by itself as a motive to join, is related to both enhancement and understanding expectations to continue service. *Helping others*



remains highly important in its orientation to public service, but as an expectation to continue service, it mixes with the individual expectations of membership, identity, and skills.

#### *Enhancement Expectations*

Enhancement expectations consisted of *being part of a valued public service, self-improvement, excitement, pride, feeling of accomplishment, aid in maturing faster, expectation for promotion, and being part of a growing organization*. Only five enhancement factors existed as motives to join, whereas eight enhancement factors emerged as expectations to continue service according to the snowball sample. *Being part of a valued public service* and *self-improvement* were the enhancement expectations with the highest importance among the snowball sample. The snowball sample widely reported *excitement* with lower importance as an expectation to continue service than its importance as a motive to join. *Pride* was reported with high importance, but by only two snowball respondents. Only two snowball respondents reported *an expectation for promotion* as either moderately or highly important. Only one respondent respectively reported the remaining expectations, *a feeling of accomplishment, being part of a growing organization* and *aiding in maturing faster*.

*Being part of a valued public service*, as an expectation to continue service, had a higher importance level among the snowball respondents. As a motive to join, *being part of a valued public service* was reported fewer times and with less importance. This suggests that this individual response experiences some importance drift from motive to expectation. Public service as a motive to join was unclear. In many interviews and concept maps, public service was related to values motives (i.e. *helping others* by serving the public). As described in the values expectation analysis, being part of a valued public service has enhancement connotations also. Personal identity, membership, and status emerge as part of this new expectation that clearly does not relate to values motives. Plainly, public service as an expectation changes from its emergence as a motive beyond a simple importance drift.

The snowball sample also largely ignored or reported with lower importance *self-improvement* as a motive to join. As an expectation to continue service though, *self-improvement* received a higher reported importance from the snowball sample.

According to the snowball respondents, *excitement* as a motive to join was highly important. As an expectation to continue service, the snowball respondents indicate that *excitement* is much less important. This decrease in the importance of excitement may be due to a number of socially accepted responses. It is possible that established volunteer firefighters desire to avoid the stigma of being an excitement/risk junkie that is often associated with rookie firefighters. By downplaying the importance of excitement, the volunteer projects the image of an established, seasoned veteran. Another explanation for the decrease in the importance of excitement could be its replacement by learning or understanding factors. Once a volunteer firefighter learns the intricacies of the occupation, enabling them to become a productive member of the service, the adrenaline filled events likely become mundane. While the importance of *excitement* fades with service, personal enhancement in other forms increase in importance, maintaining the importance of enhancement expectations overall.

Only one snowball respondent reported that a *feeling of accomplishment* was highly important as an expectation to continue serving. As a motive to join, the qualitative results suggested it was relatively unimportant. Despite this, it was included in the survey instrument and quantitative analysis. One cannot draw an inference from the single snowball respondent in the qualitative analysis regarding its importance as an expectation to continue service. As a result, I used the quantitative expectation analysis to establish definitively if any motive to expectation drift existed.

Figure 5.2 outlines respondent 20's motive/expectation concept map comparison as an example of someone who joins due to enhancement motives.

As Figure 5.2 demonstrates, the highly important enhancement motive, *excitement*, has become of low importance as an expectation to continue service. This concept map illustrates the common

motive/expectation drift observed in the sample. *Excitement*, that was important to respondent 20 when they joined the volunteer fire service, is no longer one of the concepts of primary importance to keep them volunteering. A fire department that includes excitement as the sole primary factor of service would likely find respondent 20 disengaging from service. It is interesting to note that the values motive, *helping others*, previously discussed, did not experience drift and was still highly important as an expectation to continue service. *Learning new skills* drifted from low importance as a motive to join into high importance as an expectation to continue service. Respondent 20's *father*, the social motive, remained highly important during the transition from motive to expectation. Despite this, Figure 5.2 demonstrates that *excitement*, the enhancement motive, did not survive the 36 years of service that respondent 20 possessed. Respondent 19, with only 13 years of service, reported a similar decline in the importance of *excitement*. Like respondent 20, for respondent 19, *excitement* was highly important as a motive to join and of low importance as an expectation to continue service. It is clearly less important as an expectation to continue service than it is as a motive to join. *A feeling of accomplishment*, an enhancement expectation absent from respondent 20's motive map, emerged as a highly important, despite appearing in a new second row of expectations. It is also important to note that the values motive, *helping others*, maintained its importance as an expectation to continue service, while another values expectation, *civic responsibility*, emerged as highly important. Interestingly, despite the decline in importance of *excitement*, it attaches to *learning new skills*, an understanding motive with low importance that became highly important as an expectation to continue service. This suggests that for respondent 20, enhancement and understanding expectations are related.

#### *Understanding Expectations*

Two individual responses comprised understanding factors in the motive analysis, *obtaining training* and *acquiring/applying new skills*. Of the two understanding expectations, *acquiring/applying new skills* was reported by more snowball respondents than *obtaining*

*training*, although both are considered highly important. Only three snowball respondents reported importance for *obtaining training*, compared to fourteen for *acquiring/applying new skills*. *Obtaining training* may only serve to improve the volunteer's organizational input. *Acquiring/applying new skills* though, provides the volunteer with abilities that they can use outside of the organization.

As an expectation to continue serving, *obtaining training* was highly important when reported. As a motive to join, *obtaining training* was of low importance among the snowball respondents. Therefore, these qualitative results suggest that, once again, a naïve motive to join has transformed and become more important as an expectation to continue service. Given the increases associated with *helping others* and self-improvement, the increase in *obtaining training* supports the previously established work of Flynn and Black (2011), Rogers (1951), and Maslow (1950). *Obtaining training* as an expectation to continue serving does not simply improve the way by which the volunteer helps others or only improve the volunteer, instead the qualitative expectation results suggest it does both. According to the snowball respondents, *acquiring and applying new skills* is also more important as an expectation to continue service than it was as a motive to join. This suggests that overall, understanding factors, are moderately to highly important as expectations to continue service. As previously discussed, these training and skills expectations can be tied to both self-improvement and increasing the ways by which a volunteer can help others. Understanding expectations serve both values factors, by providing knowledge and skills for volunteer firefighters to serve others, and enhancement factors, by providing volunteer firefighters knowledge and skills that serve themselves. As a result, understanding expectations serve as a connection between values and enhancement factors, the two factors with the highest importance during the recruitment and retention stages. Fire service leaders should consider bridging the gap between understanding motives being moderate to low importance and understanding expectations being moderate to high importance. Fire service leaders should emphasize the importance of understanding factors during recruitment, in order to prepare

volunteers for what will eventually become moderately to highly important for retention. Figure 5.3 provides a graphical comparison of respondent 18's motive and expectation concept maps. As illustrated in Chapter 4 and demonstrated in Figure 5.3, respondent 18 clearly places an emphasis on the importance of *friends/family in service* and *excitement* when joining. However, *learning new skills* was also a highly important motive to join. Despite respondent 18 having social, enhancement and understanding factors as important motives to join, only the understanding factors survived their 31 years of service. As the expectation map shows, the enhancement factor, *excitement*, and the social factor, *friends/family in service*, are no longer highly important and are disconnected in the map. These naïve motives have transformed into less important expectations to continue service, with values expectations, *civic responsibility* and *helping others*, becoming the triad that represents the core expectations. Understanding motives continued to be highly important to respondent 18 during recruitment and after serving for 31 years.

It is also important to note that respondent 18's expectation map became much more compressed and overlapping than the motive map. While enhancement became a secondary concern among expectations, *learning and applying new skills*, the highly important understanding expectation, became the linkage between the values and enhancement expectations. Respondent 18's expectation map reinforces the theory that understanding factors can act as a connector between values and enhancement factors. When considering the works of Flynn and Black (2011), Rogers (1951), and Maslow (1950), who suggest that values and enhancement related expectations are related and convergent, this concept map suggests that understanding expectations serve as the connection in the relationship.

#### *Social Expectations*

The social expectations that emerged during interviews and concept maps were the following: *family/friends in service, fellowship/brotherhood, sense of belonging, family tradition of volunteering (non-fire department related), and sense of community involvement. Friends/family*

*in service* was widely reported by the snowball sample, but as an expectation to continue service shifted downward in importance sharply. This social decline may be due to volunteers learning values and enhancement expectations, which become more important. Alternatively, perhaps some of the friends and family that influenced the volunteer when joining disengage from service. *Fellowship/brotherhood* remained highly important and saw an increase in reported importance. This suggests that the relationships with other members of the department become important, which could replace the friends and family that disengage from service. Given the commitments involved in terms of time and availability, this *fellowship/brotherhood* may occasionally be more important than familial relationships during the service stage. Two snowball respondents reported a *sense of belonging* as moderately and highly important. A single snowball respondent again reported high importance for *a family tradition of volunteering in non-fire department activities*. Finally, no snowball respondents reported importance for a *sense of community involvement* as an expectation to continue serving.

According to the snowball sample, *friends and family in service* was a highly important motive to join. As an expectation to continue serving, *friends and family in service* had markedly lower reported importance levels. Although I will ultimately use the quantitative results to verify these qualitative results, the snowball sample suggests that social factors such as the influence of friends and family experiences significant drift in salience from motive to expectation.

*Fellowship/brotherhood* was moderately important as a motive to join. The expectation analysis revealed that there was a significantly higher importance placed on this individual response by the snowball sample. This suggests that the social factors discussed in the motive analysis experienced some of the motive drift discussed previously. While the importance of *friends and family in service* drifted to a less important expectation to continue serving, *fellowship/brotherhood* drifted to more important as an expectation. The other social motives, *family tradition of volunteering in non-fire service opportunities*, *sense of belonging*, and *sense of*

*community involvement*, remained roughly static during their transition from motive to expectation.

Social factors appeared to be the most important motive to join according to the snowball sample. During service though, it is apparent that the *fellowship/brotherhood* associated with the members of the fire department are more important amongst respondents (i.e., social expectations become more insular). This social influence is not primarily found with *friends and family in service*. Instead, the idea of social integration into the existing organization appears to be more important as an expectation to continue service. *Family/friends in service*, which appeared as highly important recruitment functions in small communities, are clearly not essential to retention according to the snowball sample.

Chapter 4 discussed the importance of recruiting outside of the insular network of core volunteer families. Values and enhancement motives are highly important during recruitment and remain highly important to retention. Likewise, understanding factors tend to mature to moderately/highly important during the service stage. Those three factors, then, can aid in recruiting and retaining volunteer firefighters outside of these insular social networks. Such a strategy seems workable as the snowball sample suggests that the social motives to join transmute and become more aligned with *fellowship* and *brotherhood*. That means efforts to extend outside of the established insular network are workable as long as departments meet values, enhancement and understanding expectations. Social expectations can be met as new members located outside the existing network are added to the community that binds all of them to the service.

Respondent 19 provides an excellent example of the importance drift within these social factors (see Figure 5.4). Respondent 19's motive map demonstrates a volunteer that joined because of existing family in the fire service. Figures 5.1 and 5.3 illustrate a similar decline in the importance of family in service. As is the case in so many small communities, families serving in the local fire department apply influence on other family members to serve also. In respondent 19's expectation map, however, there are no social factors present. This suggests that social

factors are not crucial to continued service for respondent 19. This is perhaps the most dramatic importance drift among all the factors demonstrated. What was highly important as a motive to join is unimportant as an expectation to continue service.

Values expectations (*helping others* and *civic responsibility*) emerge as highly important expectations to continue service. *Excitement*, like respondent 20 above, has faded in importance from highly important to low importance. *Learning new skills*, an understanding factor, while disconnected and slightly lower in importance, remained in the expectation map. The only other expectation to continue service is *being part of a valued public service*. It remains highly important as an expectation to continue service and connects the two reported values expectations. The absence of social factors as expectations to continue service is obvious and telling for respondent 19. One cannot conclude the assumption that this dramatic drift among social factors is present among the entire population based upon this single respondent. The quantitative analysis will draw inferences from a larger, probability sample to create more accurate estimates regarding this assumed motive/expectation drift. The qualitative results suggest that social motives and expectations warrant specific attention during the quantitative analysis.

#### *Protective Expectations*

Snowball respondents considered only one individual response during the motive analysis, *having resources others do not*. Only two snowball respondents reported any importance for this expectation. One reported *having resources others do not* as an expectation to continue service with high importance and the other reported it was of low importance. This suggests that protective expectations do exist within a tertiary tier of influences.

All of the respondents were prompted on the importance of this individual response as a motive to join and none voluntarily submitted it as important. While three respondents reported some level of importance with protective motives, only two snowball respondents reported any importance associated with protective expectations. Again, one must utilize the quantitative analysis to



validate this finding, as the importance of this expectation cannot be based on only two respondents. Respondent 30 was the only snowball respondent to indicate that protective motives were highly important. Figure 5.5 illustrates respondent 30's motive/expectation concept map comparison.

Although *excitement* and *helping fellow members of the community* are more important as motives to join for respondent 30, high importance was associated with *feeling more privileged than others in the community*. Later, respondent 30 reported that *feeling more privileged than others* was of low importance as an expectation to continue service. Like other snowball respondents, respondent 30's map shows that *excitement* fades in importance, *helping others* maintains, understanding increases, and social motives related to *family in service* drop out as an expectation to continue service. The remaining social expectation relates to *fellowship/brotherhood*, a transition previously discussed. The concept of *feeling more privileged than others in the community*, the protective factor, fades from highly important as a motive to join into an expectation to continue service with low importance.

This is yet another example that what is important to volunteer firefighters as a naïve motive to join is not necessarily that, which is important as an informed expectation to continue serving. Again, what brings a volunteer to the fire service may not be useful in keeping them in the fire service. It is also possible that because respondent 30, like all snowball respondents, had to be prompted for a reply regarding protective factors, that the protective factor served as a subterfuge, hiding respondent 30's true motivations, which according to the expectation map is enhancement, understanding, and values factors.

#### *Career Expectations*

Snowball respondents reported two expectations to continue service related to career factors. First, snowball respondents reported *seeking full-time employment* as an expectation to continue service, but considered it as having moderate to low importance. *Money* also emerged as an expectation to continue service although most reporting respondents required prompting

regarding this response. *Money* represents a stipend, pay-per-call, mileage/cost reimbursement, or other remuneration. Like *seeking full-time employment*, *money* is often attributed a low level of import.

As a motive to join, *seeking full-time employment* was of low importance among the snowball sample. Although *money* is of low importance as an expectation to continue service, its emergence is worth noting. Many snowball respondents indicated in their interviews that they appreciate the money they receive. Many of those same respondents stated that although they were grateful for the financial rewards, they do not volunteer because of those rewards and would not care if they no longer received them. The snowball sample suggests that *money* factors, such as pay-per-call and retirement are not helpful to retention, as they are unimportant expectations to continue service. Respondent 29 was the only snowball respondent to report high importance among career factors as a motive to join, but did not possess more than two years of service.

Therefore, respondent 29 did not complete an expectation ( $t_n$ ) concept map. Figure 5.6 illustrates the motive/expectation comparison for respondent 17, who was the only snowball respondent reporting moderate importance for *obtaining full-time employment* as a motive to join.

Figure 5.6 reveals that respondent 17 considered *obtaining full-time employment* moderately important as a motive to join. After four years of service, *obtaining full-time employment* has become of low importance, signaling motive to expectation importance drift. Figure 5.6 also illustrates that *money*, the other career related factor, did emerge as an expectation to continue service. Although it emerged as an expectation with low importance, it was not found as a motive to join. However, one must also consider the location within the map. Here, *money* is relatively less important and disconnected from the core expectations found within the map. This suggests that while *obtaining full-time employment* declines in importance with service, *money* may show marginal import with further service. Nevertheless, career factors remain the least important overall.

Conversely, Figure 5.7 demonstrates *obtaining full-time employment*, of low importance as a motive to join, becomes moderately important as an expectation to continue service, according to respondent 17a. *Money* also appears as an expectation to continue service, albeit with low importance. Respondent 17a's motive and expectation maps are very complex and reveal that enhancement factors serve as primary motives to join and expectations to serve. *Getting skills/training*, an understanding motive, fades somewhat in importance as an expectation. This could suggest that the career related factors are also tied to enhancement, as is apparent by the presence of *personal pride* and *being part of a valued public service*, both highly important expectations.

The compression, overlapping, and complexity of these concept maps may also be the result of a female gender identity. It would suggest that gender differences create motive and expectation differences – clearly a viable theory. While overall career factors are of the lowest importance, the increase in the importance of career expectations may relate to the importance of enhancement expectations or to gender identity, or both in an interactive relationship. Gender as a variable will be analyzed more closely in the quantitative analysis.

This overall low importance of career motives and expectations is critical to both recruitment and retention. For recruitment purposes, offering monetary rewards to volunteer firefighters appears to be inappropriate, as volunteer firefighters are not concerned with *money* as a motive to join. Its emergence as an expectation to continue serving also seems of relatively low importance versus nonmonetary rewards of service. This suggests that providing monetary rewards to volunteer firefighters in an effort to retain them, although somewhat appreciated, may be largely inefficient. Like the qualitative analysis overall, these results are not conclusive. The subsequent quantitative analysis provides the results from which inferences can be drawn. These motive and expectation map comparisons simply act as visual aids to understand the concept of motive/expectation drift.

### *Miscellaneous Expectations*

The expectation analysis revealed several individual responses that could not be classified according to the Clary, et al. (1998) framework. One respondent reported low importance for *equipment provided* as an expectation to continue service. Respondent 22 stated that this expectation is concerned with the personal protective equipment and apparatus provided to volunteer firefighters so that they can provide service. Volunteer firefighters may take pride in their equipment or apparatus, which suggests that this response may be an enhancement factor. However, because the response also deals with the ability to help others, it may also be related to values factors.

Another respondent reported moderate importance from *helping others in the department* as an expectation to continue serving. Unlike *helping community members in need*, respondent 24 explained that this response relates to training other members of the department so that they can safely serve. This response relates to understanding by a respondent applying their skills, values by a respondent helping others through others, social through the *fellowship* of *helping others in the department*, and enhancement factors through the respondent improving themselves and experiencing a *feeling of accomplishment* while training others in the department.

The *Sofa Super Store fire* was again a highly important expectation to continue service for respondent six. Recall that the Sofa Super Store fire was an incident that occurred on June 18, 2007 in Charleston, South Carolina where nine City of Charleston firefighters lost their lives in the line of duty. This expectation, like its motive counterpart, probably relates most closely to the values motive. Respondent six stated that he desired to join and to continue serving so that he could honor the memory of the nine firefighters that died in the line of duty by *helping others*. Likewise, a *fascination with the fire service* remained highly important for one respondent. Respondent 21 was the sole respondent to report this response as a motive to join or expectation to continue serving. During the motive analysis, I proposed that this response possibly related to enhancement factors. The fascination surrounding all aspects of the fire service parallels the

*excitement* surrounding all aspects of the fire service. *Excitement* was the individual response among enhancement factors with the highest importance within the motive analysis.

### **Qualitative Categories of Joiners**

Using the categories established in Chapter 4 (Family Firefighter, Altruist, Excitement/Risk Junkie, and Learner), I examined the expectation concept maps for each to hypothesize the transformation of motives into expectations. This analysis took the example of each of the snowball sample respondent's motive concept map identified by the prominent motives to join or pairs of motives and compared it to their eventual expectation concept map.

Respondent 22 (figure not shown) was analyzed as an example of a family firefighter. Chapter 4 identified that aside from *helping others, family and friends in service* was the only other highly important motive to join. Both *working with others toward a common goal* and *excitement* were moderately important as motives to join. Respondent 22's expectation map reveals that *helping others* remains highly important as an expectation to continue service. *Civic responsibility* emerged and *working with others toward a common goal* transformed into highly important expectations. *Excitement* is absent from respondent 22's expectation map, demonstrating the aforementioned decline in this specific enhancement factor. More importantly for family firefighters, respondent 22's *family and friends in service* motive to join also is absent from respondent 22's expectation map. This highly important social motive to join is unimportant to respondent 22 as an expectation to continue service. This motive to expectation drift, like respondent 19 outlined in Figure 5.4, is profound and suggests that *family and friends in service*, while influential in current recruitment, is not helpful in retention.

This research identified respondent eight (see Figure 5.1 above) as an example of the altruist category of joiners. Respondent eight's motive and expectation map, outlined in Figure 5.1, shows that while some social and enhancement factors fade in importance with service. Values factors maintain and emerge as highly important. Broadly speaking, the snowball sample suggests that they appear to be the single most important factor in volunteers' decision calculi.

Respondent 21 (figure not shown) was analyzed as an example of an excitement/risk junkie type of joiner. For respondent 21, *excitement* was a highly important motive to join. The only other highly important motive to join was a *fascination with the fire service*. *Helping others* was of low importance to respondent 21 as a motive to join. Respondent 21's expectation map reveals that *helping others*, a values factor, transforms into a highly important expectation to continue service, accompanied by the emergence of *civic responsibility*, which is also highly important as an expectation to continue service. The result suggests that those volunteers seeking risk and excitement mature with service and tend to latch onto the dominate expectations within the group – *helping others*. *Fascination with the fire service*, a miscellaneous factor, remained highly important as an expectation to continue service. *Excitement*, the highly important enhancement motive to join, drifted to an expectation to continue service of low importance. This downward drift in importance is present in Figures 5.2 through Figures 5.6, suggesting that this enhancement factor, while important to recruitment, is inefficient for retention of volunteer firefighters. For the altruist selected, *excitement* did not survive respondent 21's 36 years of service, which may be intuitive but is important nonetheless.

Despite the lowered importance of *excitement* during service, *self-improvement* and *being part of a valued public service* emerge as highly important expectations to continue service among many snowball respondents. While it is understandable that the importance of *excitement* fades with 36 years of service, snowball respondents with fewer years of service report a less pronounced decline in its importance from motive to expectation. Only six snowball respondents possessed less than ten years of service and only four of those reported *excitement* as moderately or highly important as a motive to join. Of those four snowball respondents however, only one reported a decline in the importance of *excitement* as an expectation to continue service. While the snowball respondents with longer service suggest that *excitement* fades dramatically in importance with longer lengths of service, perhaps *excitement* is beneficial to retention during the early years of service. According to the snowball sample, after approximately ten to fifteen years of service,

*excitement* fades in importance, largely replaced by other enhancement expectations, namely *self-improvement* and *being part of a valued public service*, which remain highly important for many snowball respondents throughout their longer service lives.

The final category of joiner analyzed was the learner, represented by snowball respondent 17a (see Figure 5.7 above). The motive and expectation map comparison is complex and could be influenced by gender. Nevertheless, the importance of getting skills/training does decline in importance from motive to expectation. This is a rare occurrence among the snowball sample and may suggest that learners have shorter life cycles within the volunteer service. Essentially, they may join to learn new skills and develop understanding of the department. Once they participate and consume that knowledge, they may be a type of joiner that does eventually move on to other pastures. The majority of respondents that reported moderate to high importance of understanding motives to join reported an increase in the importance of understanding expectations to continue service. Understanding expectations increase in importance overall and approach the top tier of importance. If fire service leaders desire to retain their current volunteers outside of the classic model of values, social, and enhancement factors, understanding factors appear to be important to retention. Leaders should focus on presenting volunteers with new learning and training opportunities and these topics should be rotated to keep the material fresh. Understanding may be prone to shorter periods of service, but they are obviously important to meeting future demand. And, of course, department leaders can act to keep them engaged with new learning opportunities. It is also important to note that the understanding factors help establish connections with values and enhancement expectations, they can also help connect enhancement and career factors for the few volunteers that consider career factors important.

### **Aggregated Expectation Concept Maps**

Like the motive analysis, the above examples of respondents' expectations maps offers a first cut at my research question on volunteer firefighters' expectations to continue service. In order to understand the expectations at play among the snowball sample respondents, I constructed an

aggregated concept map. This map utilizes the reported importance values and considers the arrangement of and relationship between individual responses identified in the qualitative analysis to illustrate the relationships between expectations to continue serving and the aggregated reality surrounding them. I constructed the expectation maps in a similar manner as the preceding motive maps. First, I constructed an aggregated expectation map from individual responses, which considered both the average response in terms of importance and the number of snowball respondents that included the response. Then I considered the arrangement of concepts by snowball respondents as well as information derived from the qualitative interviews. This analysis produced the results previously described in this chapter, which served as the basis for construction of the aggregated individual response motive and expectation concept maps (see Figure 5.8).

Figure 5.8 illustrates that highly important motives to join consist of *friends/family in service*, *helping others*, and *excitement* overall. *Obtaining training/acquiring skills* was moderately important during recruitment, followed by *self-improvement* and *seeking full-time employment*, both of low importance. Again, this particular construct does emphasize the insular nature of volunteer recruitment patterns. The expectation map is slightly more complex with a few added responses. While *helping others*, *obtaining training/acquiring skills*, *seeking full-time employment*, and *self-improvement* remained relatively stable, *friends/family in service* and *excitement* declined in importance as expectations to continue service. Additionally, *a sense of civic responsibility* and *money* emerge as moderately important and of low importance respectively. The relationships between individual responses also are altered somewhat from the motive stage to the expectation stage. This is demonstrated by the slightly flatter nature of the expectation map when compared to the motive map.

*Friends/family in service* drops to moderate importance as an expectation tied to *civic responsibility*. In some cases, the family members of the respondents in lieu of pressures from the community or department may drive the *civic responsibility* expectation. *Helping others* as



an expectation to continue service remains highly important while a *sense of civic responsibility* appears to be moderately important. The persistence of *helping others* as consistently important through maturation and the lack of overall drift clearly sets it apart from other responses. On the other hand, the social motive retreats upon maturation. This waning social impetus allows values based responses to become the core expectation among my sample of volunteer firefighters. This research proposed that what brings a volunteer to service might not be sufficient to keep them serving. In this case, social ties bring some volunteers to service but may not keep them serving, as demonstrated by the reduction in importance of those social ties. In the end, it is the process of maturation into values that seems to cement volunteers. Thus, it is important to place an emphasis on values in initial orientation and training as well as ongoing training of department veterans. These value based categories represent the anchor points for many volunteers and must be maintained as such.

Like social motives, *excitement* drops a rung to moderately important. It is largely replaced by other expectations and typically fades in importance during service. *Self-improvement*, another enhancement expectation, remains of low importance but serves as a pivot point upon which values, understanding, and career expectations connect. This relationship of enhancement, values, and understanding factors is critical to understand. Because *excitement* substantively fades with service, other enhancement expectations must serve to link understanding and values expectations, such as *helping others* and *civic responsibility*. Self-improvement appears to be the enzymatic connector in the aggregated map.

*Obtaining training/acquiring skills* appears as a moderately important expectation. As many respondents indicated in their interviews, they did not fully appreciate the level of training required to perform in the fire service until well after their service began. Although this expectation enables the volunteer firefighter to better help others, it is also closely tied to *self-improvement*, which emerges, but remains of relatively low importance overall. Although the scores for *self-improvement* were high in importance from those that reported, less than half of

the snowball sample reported any importance for this expectation. This really suggests that there is a subgroup of learners within the service. Again, these learners may be prone to moving on to other volunteer opportunities unless department leaders keep them engaged with challenging new opportunities to acquire skills and understanding. Given that *helping others* remained the core expectation to continue service, understanding and values expectations would be what motivates learners and altruists respectively. Both altruists and learners derive value from *obtaining training/acquiring skills*. The skills and training allow volunteers to serve a greater purpose of helping others and at the same time is personally rewarding and self-actualizing.

Among career factors, respondents placed low importance on *seeking full-time employment*, which is also related to *self-improvement*. Finally, *money* appeared as an expectation to continue service but was of relatively low importance. As discussed, many respondents indicated in their interviews that they were appreciative of the *supplemental income* but did not consider it important to their continued service with the department.

This research assumed that motives to join do not possess a seamless transition into expectations to continue service. In fact, I hypothesized that motives and expectations were much different. Without experience, motives to join are naïve and uninformed at best. Volunteer firefighters develop expectations through informed and realized service. Figure 5.8 suggests that what is important to continue serving in the volunteer fire service is somewhat different from what is important when joining the volunteer fire service.

Chapter 4 identified what Figure 5.8 demonstrates. Individuals typically consider social, values, and enhancement motives important when joining the volunteer fire service. The overarching problem with the volunteer fire service is that an insular recruitment pool exists for most departments and that future provision of protection services depends upon the ability to build connections and recruit outside of the current pool. Because social motives fade in importance during their maturation into informed expectations, values and enhancement factors remain, with the former being more important. The use of understanding factors, such as *obtaining training*

and *acquiring/applying new skills*, potentially allows for recruitment to access prospective volunteers outside of the classic values/enhancement models. Recall that enhancement and values factors are not mutually exclusive. Understanding factors benefit those that consider values factors more important, such as *helping others*, and those that consider enhancement factors, such as self-improvement and *excitement*, more important. Additionally, in an occupation where every volunteer counts, understanding factors, through its connection to self-improvement, can also access a small number of volunteers that consider career factors important. Because of their inherent focus on moving up in the department, it may be that this smaller pool is critical in other ways as they may make up a core of prospective team leaders and active members.

Following my aggregate of respondent factors, I reconstructed the expectation concept map according to the Clary et al. (1998) factors. This map took the individual responses and coded them to their appropriate factor as previously established in the motive analysis. Figure 5.9 illustrates the coded motive and expectation comparison from my snowball sample.

Social expectations decline to moderately important. The *family/friends in service* that influenced the respondent's decision to join yields to the importance of *fellowship* within the service group. *Family and friends in service*, which was the motive to join with the highest importance, became a moderately important expectation to continue service. This is not to suggest that social factors are unimportant, as the *fellowship/brotherhood* expectation became an expectation to continue service with a higher reported importance. This suggests that the *fellowship* developed with the existing social structures within the organization during the service stage can replace the importance of *friends and family in service* when joining. As a result, social factors overall became moderately important.

Values expectations remain highly important due to the sustained importance of *helping others* and the emergence of *civic responsibility* expectations. These values responses represent the first and third most important expectations to continue service among the snowball sample. The

absence of *civic responsibility* as a motive to join suggests that it does not fully develop among volunteer firefighters until an established service length. The presence of *helping others* and its high importance as both a motive to join and an expectation to serve suggests that it is a fundamental factor of both recruitment and retention. In fact, it would be difficult to imagine a volunteer firefighter with no regard to helping others given the altruistic nature of the service. Enhancement factors become highly important as expectations to continue service but that is not because of *excitement* or risk taking, which faded tremendously during service. This decline in importance of *excitement* from motive to expectation is present even among the excitement/risk junkies during the above analysis of categories of joiners. In lieu of *excitement*, *self-improvement* and *being part of a valued public service* increase in importance and help to elevate enhancement expectations to high importance in aggregate. *Self-improvement*, in particular, emerges as the fourth most important expectation to continue service among the snowball sample. *Being part of a valued public service*, as an expectation, narrowly misses the lower threshold of high importance. Despite being moderately important, its emergence as an expectation helped to propel enhancement expectations into a high importance level factor.

Understanding expectations are more important than their motive counterparts, but when coded still remain just moderately important. However, there was a marked increase in expectation importance from motive importance for both individual responses. As the snowball sample interviews revealed, many volunteers did not realize the magnitude of training required to serve as a firefighter at the time they joined the service. The increase in *obtaining training* and *acquiring skills* confirms these statements. It is not until volunteer firefighters develop informed expectations to continue service that they can realize the importance of *obtaining training* and *acquiring skills*. Comparatively though, these understanding expectations are moderately important to continued service.

Understanding expectations are tied with *helping others* and *self-improvement*. *Self-improvement* is also related to *seeking full-time employment*, which along with *money*, emerged as the only two

expectations for continued service related to the Clary, et al. (1998) career factors. As volunteer firefighters *obtain training* and *acquire skills*, they improve their employability and increase the chances of *obtaining full-time employment* in the fire service. Despite the connection to understanding factors, career expectations are of relatively low importance. Additionally, protective expectations, which were absent from motive maps, were also expectations of low importance.

By comparison, even the coded motive to join and expectation to continue serving maps appear quite different. Several changes occur, as outlined above, that reinforce the concept of motive/expectation importance drift.

The overall qualitative results suggest that the theory of motive and expectation importance drift has strong validity. The snowball sample reported much different motives to join than expectations to continue service. This reinforces the concept that what brings a volunteer firefighter to the service may be much different from what keeps the volunteer firefighter in service. However, these qualitative results are based upon a small n / non-probability sample. Therefore, this research utilizes the quantitative analysis to further develop conclusions based upon data gathered from a random, representative sample of volunteer firefighters.

### **Quantitative Approach to Understanding Firefighters' Expectations to Continue Serving**

The survey instrument used to collect information regarding motives to join also captured data regarding expectations to continue service. Recall that respondents selected the importance of motives and expectations almost simultaneously (see Figure 3.5). Unlike the qualitative methods, which allowed for open-ended responses necessary to capture a wide range of expectations, the survey instrument constrained response sets to the same factors presented as motives to join. The random sample, that completed the survey instrument, was significantly larger with 217 respondents participating and it was selected using probability-sampling methods. This made the quantitative results much more valid and reliable for drawing final conclusions of volunteer firefighters' expectations to continue service.

### *Aggregate Expectation Importance*

Like the motive analysis, I analyzed individual responses about their expectations first. Table 5.2 illustrates the random sample's reported individual responses as expectations to continue serving. As Table 5.2 suggests, there were several expectations to continue service that on average were rated highly important. *Helping others*, a values expectation, was the single most important expectation to continue service, followed closely by *civic responsibility*. This confirmed the assumptions in the above qualitative results. The next highest expectation, among the random sample respondents was *civic responsibility*, another values factor. By far, these two values factors represent the most salient and robust expectations among the random sample.

*A feeling of accomplishment* (enhancement) was next in importance. Being part of a *valued public service* (enhancement), which was moderately important in the qualitative results, performs better within the representative sample as indicated by the mean value. As previously discussed, when there is divergence between the qualitative and quantitative results, the more reliable estimates come from the quantitative results. Therefore, being part of a *valued public service* is highly important as an expectation to continue service. Both the snowball and random respondents reported *obtaining training* (understanding) as a highly important expectation to continue service. This supports the presumption that *obtaining training* becomes highly important as an expectation to continue service because the training is necessary to both improve the individual and enhance the ways by which the individual can help others. *Serving as a role model*, a values expectation, emerged as the final expectation to continue service with high importance among the random sample respondents.

Among the moderately important expectations to continue service, *acquiring skills* (understanding) was of the highest importance. *Obtaining training* is likely to be interpreted as being more beneficial to organizational improvement, while *acquiring skills* is likely to be more beneficial to improving the individual respondent. With the observed emphasis on *helping others* in the sample, it is not surprising that an expectation such as *obtaining training* would have a

higher importance among volunteer firefighters. This is not to suggest that *acquiring skills* is unimportant. As Flynn and Black (2011) suggest, this does not represent a dichotomization of altruism and self-interest. Both *helping others* and helping oneself are important to respondents within the random sample. Comparatively though, *helping others* is more important and a fundamental expectation to continue service. Helping oneself has a lower relative importance as demonstrated by the moderate importance associated with *acquiring skills* as reported by the random sample.

Random sample respondents also reported moderate importance associated with *having resources sufficient to volunteer*, a protective expectation. Random sample respondents also reported moderate importance for payback to the community for own successes (protective). In the representative sample, then, protective factors are performing better. The factor may not have a clear initial salience with respondents, but given the prompt respondents do appear to exhibit the type of guilt relief described by Clary, et al. (1998). The combination of both response items suggests that protective expectations are at least moderately important to respondents. I assessed this further in the coded expectation analysis that I discuss later in this chapter.

The influence of *close friends/family members*, a social expectation, was also moderately important according to the observed mean for the random sample respondents. *Acquaintances* (social) were moderately important but just slightly less than the *friends and family in service* response item. It is possible, however, that *fellowship*, a highly important expectation to continue service, is inclusive of *friends and family in service* as well as *acquaintances* to some respondents. On whole, then, social factors may be just outside of the top tier of factors.

The final moderately important expectations for was *networking with community and business leaders*. Although this expectation likely has some social value to respondents, its primary value is that of career factors and career factors did underperform. *Gaining employment* and *supplemental income*, which are the other two career expectations, revealed low responses among random sample respondents. While *gaining employment* was just below the threshold for

moderate importance, supplemental *income* was much closer to the level of unimportance. The quantitative results suggests that Clary, et al. (1998) career factor was subpar in terms of importance, thus it would call into question the usefulness of financial rewards to retain volunteers. Actually this is an important finding. It means that volunteer departments are not necessarily able to buy their way out of retention problems. The most important factors are values and enhancement. Departments must find means to emphasize and actualize these roles within the department. That by nature may be a very difficult challenge; more so than coming up with financial incentives that may be ineffective at stemming volunteer losses.

To aggregate and translate these findings, Table 5.3 demonstrates the aggregated mean for each of the Clary, et al. (1998) factors. Values expectations possess the highest mean importance among the random, representative sample. Enhancement factors are also highly important expectations to continue service. Understanding expectations emerged at a value just below the lower threshold for high importance. Understanding factors, along with social and protective factors represent expectations to continue service that are clearly in a second tier of importance. Career expectations were of low importance. This is intuitive given the low importance scores for the individual responses associated with career factors.

Unlike the qualitative results, the quantitative results yield a standard deviation associated with each mean average for each individual response. Table 5.3 shows that only two responses have a standard deviation below 0.5 or half a response interval – *helping others* and *civic responsibility* – which represent the highest mean averages and narrowest standard deviations. These clearly are the most important expectations to continue service. The widest standard deviations are among *gaining employment*, *supplemental income*, *acquaintances*, and *close friends/family members*.

This suggests that the importance of these factors vary more widely among random sample respondents. From a macro-level, Table 5.3 demonstrates that values and enhancement expectations have the highest means and narrowest standard deviations. This suggests that



overall, values and enhancement factors are the most important expectations to continue service among the representative sample.

#### *Alteration of Motives into Expectations*

Next, I examined the presence of motive/expectation drift among the quantitative results. Like the qualitative results, this analysis searched for changes in mean values, which would suggest a difference of substantive importance. Table 5.4 outlines the quantitative motive and expectation importance results, according to the random sample.

As Table 5.4 illustrates, none of the expectations had a greater than 0.20 difference from their respective motives to join. In fact, the maximum amount of change from motive to expectation was +0.19 among *networking with community and business leaders*. The only two individual responses that experienced a negative deviation in the mean value from its motive to join to its expectation to continue serving was *helping others* and *acquaintance*, which showed drops of -0.06 and -0.04 respectively. The remainder of the individual responses increased in importance from motive to expectation suggesting that respondents learned that these factors were present and assessed at least some added value to them. These big picture results, however, suggest that there is a marginal motive-to-expectation drift among the random sample respondents overall. That, of course, assumes that each respondent has the same motives to join and expectations to continue service and we know that is decidedly untrue from the qualitative analysis. It is important to note that among the individual responses, *obtaining training* and *acquiring skills* were two individual responses with the highest increase in importance from motive to expectation, so understanding again pops its head up as being a critical issue in maturation of expectations.

Like the motive analysis, I then conducted a comparison of the aggregated Clary, et al. (1998) factors from motive to expectation. Table 5.5 presents the quantitative survey coded responses by Clary, et al. (1998) factor.

As expected the results map to the above but offer a slightly better perspective. Like the individual responses, the Clary et al. (1998) coded factors exhibit small increases from motive to expectation. This suggests that, among the random sample respondents, the aggregate level of importance of motives to join is not markedly different even though the mixture is changing underneath. It is interesting to note that all of the expectations to continue serving increased in importance from their corresponding motives to join. This would suggest that on whole, respondents are placing more emphasis on every factor in aggregate. Career and understanding expectations possessed the highest importance drift of the six Clary, et al. (1998) factors. Because career factors remained of low importance as expectations to continue service, the significance of the increase in understanding expectations demands special attention. Figure 5.10 provides a graphical comparison of the motives to join versus the expectations to continue serving.

Figure 5.10 demonstrates the overall lack of variability between motives and expectations. However, understanding expectations clearly have moved upward in importance from their motive counterparts. Understanding motives appear to fall in the secondary tier of importance. As expectations to continue service though, understanding factors increase in importance to a level that approaches high importance or the primary tier. At the very least, expectations to continue service emerge into four levels of importance, as opposed to the three tiers that exist for motives. The top tier of expectation importance is clearly still values and enhancement factors. Understanding expectations emerge in a secondary tier of importance. Social and protective expectations are in the third tier of importance, with social declining slightly and protective increasing slightly in importance. The fourth tier of importance contains career expectations. Although career factors increase slightly in importance from motive to expectation, they remain the factor of least importance or relevance to retention.

This research also considered alternative explanations by examining institutional and demographic differences between respondents. This evaluated the effects of the institutional and

demographic control variables on the six Clary, et al. (1998) factors as expectations to continue service.

### *Institutional Differences*

First, I conducted a difference of means test on the institutional control variables (see Table 5.6). Again, the institutional control variables included department type/organizational structure and type of population served. Department types consisted of wholly volunteer and mostly volunteer departments. Recall that departments with a majority of paid/career firefighters or those that are exclusively paid did not participate in this research. Respondents reported the perceived population type served by their department as rural, suburban/urban.

There was no statistically significant difference of means between organizational structure/department types and only two differences among factors between population types served. I created error bar charts to provide a graphical representation of expectations to continue service as separated by institutional control variable. First, I examined department type (see Figure 5.11).

Career expectations are clearly of higher importance to respondents from mostly volunteer departments. This, like the motive complement, is simply due to the availability of career opportunities. In wholly volunteer departments that do not use paid personnel, it is understandable that volunteers would place a lower importance on career factors. In mostly volunteer departments where paid positions are available, volunteers should place a higher importance on career factors. Otherwise, Figure 5.11 illustrates minimal difference between respondents from wholly volunteer and mostly volunteer departments meaning the expectation calculus is not substantively different across the institutional divide of department type.

Next, I turned to examining type of population served. Figure 5.12 displays the comparison between respondents serving rural and suburban/urban areas.

Career and understanding expectations are significantly higher among respondents serving suburban/urban areas. The increase in the importance of career factors is likely due to correlation

with the aforementioned employment availability. Understanding expectations are also higher among respondents serving suburban/urban areas, suggesting a potential connection with more urban areas and learning. In addition to providing career opportunities, departments in suburban/urban communities are likely to be responsible for more services, increasing the importance and opportunities for understanding factors among the volunteers serving these areas.

#### *Demographic Differences*

Next, I examined demographic differences among the respondents using the difference-of-means test. This followed the previous motive analysis wherein Clary, et al. (1998) factors were examined to identify statistically significant differences in the means between the control variables. Table 5.7 outlines the results.

As Table 5.7 demonstrates, the statistically significant variances for expectations to continue service approximate those in the motive analysis, with the exception of a few differences. Like the motive responses, career and protective expectations had statistically significant differences in age, gender/race, marital status, and years of service categories. Additionally, career expectations were significantly different among parental status and full-time employment in the fire service.

To insure the accuracy of this analysis, I constructed error bar charts for each of the control variables where a significant variance existed between the mean averages. This allowed for graphical analysis of the expectations to continue service between each subset of control groups.

First, I examined age as outlined in Figure 5.13.

Respondents younger than 43 years of age report a higher importance for career and protective expectations. Older volunteers are likely already in established occupations and less likely to be interested in career factors in the fire service. Younger volunteers are more likely concerned with resources than older volunteers, who are more likely to possess resources. This explains the slight variance in the importance of career and protective expectations. Overall, Figure 5.13 illustrates that older and younger volunteers are largely similar.

Like the motive analysis, the expectation analysis combined race and gender as a single demographic control variable due to the limited number of females and racial minorities present in the representative sample. Figure 5.14 provides a graphical comparison of the expectations to continue service among traditional respondents (white males) versus non-traditional respondents. Table 5.7 demonstrates that there are statistically significant differences of mean among values, career and enhancement expectations between traditional and non-traditional respondents. Figure 5.14 illustrates these differences but also exhibits the growth in confidence intervals that results from the smaller sample size for the nontraditional firefighters. Values and enhancement are slightly higher in importance among non-traditional respondents. Career expectations are of markedly higher importance to non-traditional respondents. In wholly volunteer departments, career expectations are likely more difficult to use in retention. However, career expectations may be useful in retaining non-traditional volunteer firefighters in mostly volunteer departments that have the potential to offer employment to its members.

Traditional volunteers represent a large bulk of the existing volunteer fire service. The top tier of both the traditional and nontraditional subsets is similar. Values, enhancement, and understanding expectations are most important to both traditional and non-traditional respondents. These results suggest that offering these three factors is insufficient to retain one subset over the other. To access volunteers outside of the current insular group of traditional volunteers, departments must consider expectations that are different among nontraditional volunteers. This requires a closer inspection of Figure 5.14.

Traditional respondents place social and protective expectations in a clearly defined secondary tier of importance. Non-traditional respondents, on the other hand, consider social and protective expectations more important than traditional respondents consider and include them in their primary tier of importance. This increased interest in social and protective factors sets non-traditional respondents apart. While offering opportunities to meet values, enhancement, and understanding expectations does not appear to be enough to break out of the current insular group

of volunteers, opportunities to seek social connections and meet protective expectations could improve retention of nontraditional volunteers and aid in increasing roster numbers.

Next, I examined married versus non-married respondents. Like the motive analysis, marital status represents a highly significant control variable. Table 5.7 reveals that all of the factors except social factors have significantly different means. Figure 5.15 illustrates the comparison between married and unmarried respondents.

Like the motive results, unmarried respondents report a higher importance for values, understanding, enhancement, protective, and career expectations. Unmarried respondents also see protective expectations exceeding the importance of social expectations, while married respondents reported the converse. The largest variance exists among career expectations. Like their motive counterparts, career expectations have a much higher importance to unmarried volunteers. This is understandable as unmarried respondents are less likely to have long-term occupations and are more mobile.

Next, expectations among volunteers who are also parents versus volunteers that do not have children were examined. Table 5.7 outlined that career and enhancement expectations were significantly higher among respondents without children. Figure 5.16 illustrates the graphical comparison.

Figure 5.16 reveals that although there are two statistically significant differences of means among enhancement and career expectations between respondents with children and those without, there is relatively little overall difference between these subsets. In fact, both error bar plots for expectations to continue service resemble the overall results. Values and enhancement expectations exist in the top tier of importance, followed by understanding expectations in the second tier, then protective and social expectations in the tertiary tier, and finally career expectations in the fourth tier of importance.

Figure 5.17 illustrates the expectation difference between respondents with less than 20 years of service compared to those with more than 19 years of service. Recall that Table 5.7 illustrates

that understanding, career, and protective expectations had differences of means that were statistically significant between the two subsets.

Figure 5.17 demonstrates several interesting points. Respondents with less than 20 years of service report protective expectation as more important than social expectations. Whereas those with more than 19 years of service emphasize social connections. Volunteer service clearly is a forum for social interaction that is more likely to be valued by older and more experienced respondents. Volunteers with more than 19 years of service also report understanding expectations as part of the secondary tier of importance, perhaps suggesting that learning tails off and social ties become more important. Aging acts to isolate and thus this is most likely the most reasonable explanation. Volunteers with fewer years of service place a higher importance on understanding as it emerges in the primary tier of importance. This is critical to retention of volunteer firefighters outside of the values and enhancement expectations used in standard retention programs. Career expectations are also of higher importance among volunteers with fewer years of service, albeit still in the tertiary tier of importance. This is likely a function of the respondents' ages. Younger volunteers are less likely to have both established jobs and many years of service. Therefore, older volunteers with more years of service and rooted occupations are less likely to place importance on the career expectations available. The differences between age groups are a product of maturation and are likely present in any organization. Older volunteers are less likely to consider new approaches, tactics, or equipment. This makes the introduction of new blood into these organizations important. The organization can then serve as a connection between generations. The younger volunteers can bring new ideas to the organization, while older volunteers can provide the insight of their experiences to the younger group. This social function of the organization may not be important to the individuals, but is essential as an organizing role within the community.

There were no statistically significant differences of means for social factors among any of the control variables, except family history of firefighting. Legacy firefighters, or those with a family

history of firefighting, reported a much higher importance for social factors than non-legacy firefighters. Figure 5.18 illustrates the comparison.

As Figure 5.18 shows, social expectations are of much higher importance to legacy firefighters. This importance is precisely what places a constraint on current recruiting and retention practices. The current pool of recruits is largely from this insular social network of legacy firefighters. It is important to note the non-legacy error bar plot. Understanding expectations are again in the primary tier of importance with social expectations in the secondary or tertiary tier. To retain volunteers outside of the current closed social network, fire service leaders should be using understanding expectations. For non-legacy volunteers, understanding expectations approach the importance level of values and enhancement expectations. Departments should inform prospective recruits about the types of training they will be receiving as well as the frequency and importance of that training. Volunteers need to be participating in training events. This provides a predictable, scheduled series of events in which volunteers can participate and interact and learn the importance of values motives that act as the anchors of the department rosters. Volunteer responses to emergencies alone do not provide this type of context. Not only are emergencies unscheduled, unpredictable, and difficult for all volunteers to attend at any given time, they focus more on critical response. Training events focus more on understanding expectations and are more likely to accommodate the time demands of volunteer firefighters.

There were no statistically significant differences of means among any expectations between respondents with continuous and intermittent service. This suggests that there is no difference in the importance of the Clary, et al. (1998) factors among volunteer firefighters that have continually served versus those that have served, quit, and then returned to service. However, full-time employment in the fire service had a statistically significant effect on values expectations and career expectations. Figure 5.19 outlines the comparison of the two subsets. Despite the statistically significant differences of means, Figure 5.19 illustrates that the two subsets are relatively similar. Values expectations have little variation between the subsets;



however, career expectations have a greater variation. This is intuitive as volunteers that also hold full-time employment in the fire service would place a higher importance on career expectations than volunteers that have employment elsewhere. Otherwise, the full-time employment in the fire service as a control variable has relatively little influence on expectations to continue service.

### **Quantitative Categories of Joiners**

This research established different categories of joiners during the motive analysis. The purpose of these categories is to more broadly understand group effects within the volunteer fire service and consider different strategies for recruitment and retention. I used these categories of joiners to understand how each of their sets of motives map to expectations and any motive/expectation importance drift that may exist. Figure 5.20 outlines the comparison of motive to join against the expectations to continue service among family firefighters.

For family firefighters in the random sample, the motive analysis revealed that social factors were most important followed by values factors as motives to join. Enhancement, understanding and protective motives were moderately important and career motives were of low importance.

The comparison suggests that the social factors that approximated the importance of values factors as motives to join have decreased as expectations to continue service. The importance of *friends/family* has decreased, while the importance of *fellowship* has increased. Overall, social factors for family firefighters barely maintained their high importance through their exposure to service. Nevertheless, social expectations remain highly important for family firefighters and therefore must be met for this category of joiner. During this transformation from motive to expectation, values factors such as *helping others* and *civic responsibility*, retain the primary importance as expectations to continue service among the family firefighters and are joined by social, enhancement, and understanding expectations in the primary tier of importance. Fire service leaders cannot ignore the importance of social expectations among this large group of

volunteers but one should also note the increase in the importance of understanding factors from motive to expectation.

Figure 5.21 illustrates the motive and expectation comparison for altruists. There is an opportunity for fire service leaders to tie the social expectations that are important to family firefighters, to understanding expectations, which tend to increase in importance from motive to expectation. This increase is even more profound among altruists than the group of family firefighters. Training events, drills, and even fundraising cookouts and drill night suppers allow opportunities for volunteers to fulfill both understanding and social expectations by both learning and socializing.

Figure 5.21 demonstrates that although the rank order of factors did not change from most important to least important, all of the factors increased in importance from motive to expectation. While values, understanding, protective, and career expectations increased to some extent over their motive counterparts, enhancement and social expectations remained relatively unchanged from their importance as motives to join. The lack of change in enhancement expectations, one of two highly important expectations, suggests that values factors are the single most important factor for altruists to both join and continue serving as volunteer firefighters.

Figure 5.22 provides the motive and expectation comparison for excitement/risk junkies.

Like altruists, excitement/risk junkies consider values and enhancement factors important.

Values expectations become most important to excitement/risk junkies. This suggests that while enhancement factors such as excitement might be most important at the recruitment stage, values expectations, like the overall results, take the point position. This does not imply that excitement and other enhancement factors are no longer important. In fact, there is an increase and narrowing deviation in enhancement expectations among this category of joiner. This suggests there is still significant value in enhancement expectations for excitement/risk junkies. Like the altruists, excitement/risk junkies realize a significant increase in the importance of understanding expectations from their motive counterparts. In fact, the level of importance for understanding

expectations approaches the primary tier of importance, which contains values and enhancement expectations. Finally, Figure 5.23 examined learners' motive to join and expectations to continue service.

Figure 5.23 illustrates that learners continue to place the highest importance on understanding expectations. Values and enhancement expectations also remain in the primary tier of importance for learners. These results demonstrate that values and enhancement expectations are not mutually exclusive. Instead, they are related and convergent factors that are important to retention, particularly for this segment of the volunteer firefighter pool. While other categories of joiners experience some motive to expectation importance drift, learners' motives and expectations are relatively stable. This stability suggests that what is important to learners at the recruitment stage is also important to learners at the retention stage. Other categories of joiners may use understanding factors to meet their more important values and enhancement factors. Learners, though, consider understanding factors most important throughout their service and this may not always be a positive attribute. Training classes are often difficult to offer. Obtaining the minimum number of students, qualified instructors, books and visual aid materials, and scheduling classes at times that volunteers can attend are just a few of the obstacles that fire departments face, particularly in rural areas with limited resources. Many classes, such as Paramedic, are so long that they occur on a shift schedule during daytime hours. This schedule prohibits volunteers, who have occupational responsibilities during daytime hours, from attending. These results suggest that these obstacles will have an effect on both the recruitment and retention of learners in particular. Additionally, learners will constantly be seeking additional understanding opportunities. In a small wholly volunteer department that is responsible for only fire suppression, learning opportunities on emergency medicine, technical rescue, hazardous materials, etc. likely does not occur. In departments such as this, a learner is more likely to disengage from service once they have obtained the only learning opportunities offered. Conversely, departments that offer a myriad of services such as technical rescue and hazardous

materials are more likely to provide the challenges that are appealing to learners through their understanding expectations.

### **Chapter Conclusions**

In this chapter, the snowball sample respondents of the motive analysis continued their interview and constructed expectations concept maps if they possessed greater than two years of service.

The results of those expectation concept maps assisted in the development of the survey instrument. A comparison of the concept maps also began to reveal motive to expectation importance drift. The quantitative results confirmed this drift and demonstrates how naïve motives to join map to informed expectations to continue service.

Values and enhancement factors, like their motive to join counterparts, emerge as the expectations to continue service with the highest importance. These two expectations, represented by *helping others*, *civic responsibility*, *being a part of a valued public service*, *feeling of accomplishment*, and *excitement*, experienced relatively small increases in importance collectively from their importance as motives to join. However, understanding expectations, represented by *obtaining training* and *acquiring skills*, experience a markedly higher increase in importance from motive to join into expectation to continue service. Understanding expectations join values and enhancement expectations in the primary tier of importance at the service stage. This is significant for retention purposes. Departments may recruit based upon opportunities to meet values and enhancement motives; however, retention must also include opportunities to meet understanding expectations, which saw the largest increase in importance among upper tier factors.

The qualitative results initially discovered this change demonstrated by the quantitative results. Many of the snowball respondents indicated that they did not comprehend the value of understanding factors until after they joined and served for some time. The representative sample further explicated this change. The increased importance of understanding expectations while serving, improves the ways by which a volunteer can serve (values factors) and improves the

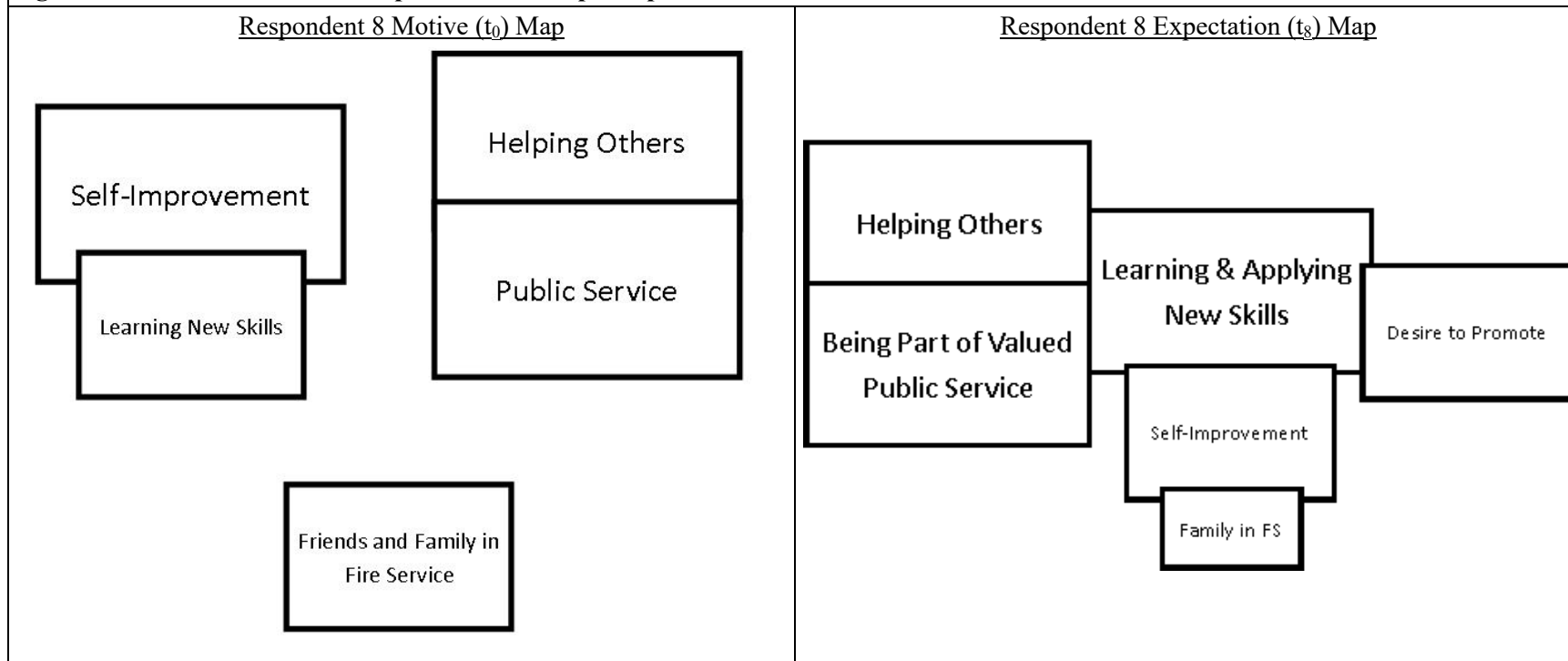
volunteer as an individual (enhancement factors). It appears that the key to these values and enhancement factors are understanding factors, which map to the primary tier of importance among expectations to continue service. As a result, departments must continually provide opportunities to meet understanding expectations, such as obtaining training and acquiring skills, in order to improve the retention of their volunteers.

Social and protective factors remain in a clearly delineated secondary tier of importance among expectations to continue service. Overall, these two sets of factors experience relatively little change in importance from motive to expectation. When compared to their social motives, *fellowship* realized the largest increase in importance among social factors, while *friends and family in service* remained relatively static and *acquaintances* saw a slight decrease in importance. This change is present even among the family firefighter category of joiner, whose members consider social motives to join more important than the average volunteer firefighter. Protective expectations increase somewhat from their motive counterparts. This is due primarily to the volunteers' consideration of *sufficient resources* to participate but may also include the volunteers' consideration of *payback to the community*. Despite the increases in both social and protective expectations, they are not primary considerations for retention. The fire service should not ignore these factors, but should take note that they are not the primary driving factors behind retaining existing personnel.

Finally, career factors, such as *networking with community and business leaders*, *gaining employment*, and *supplemental income*, all realize some of the highest increases in importance from motives to expectations. Despite these increases in importance, career factors remain in a clearly defined tertiary tier of importance among expectations to continue service. This suggests that they are the least useful in both recruitment and retention. Again, this does not suggest that some volunteers will not consider career factors highly important, but overall, career factors possess low importance in regards to retention.

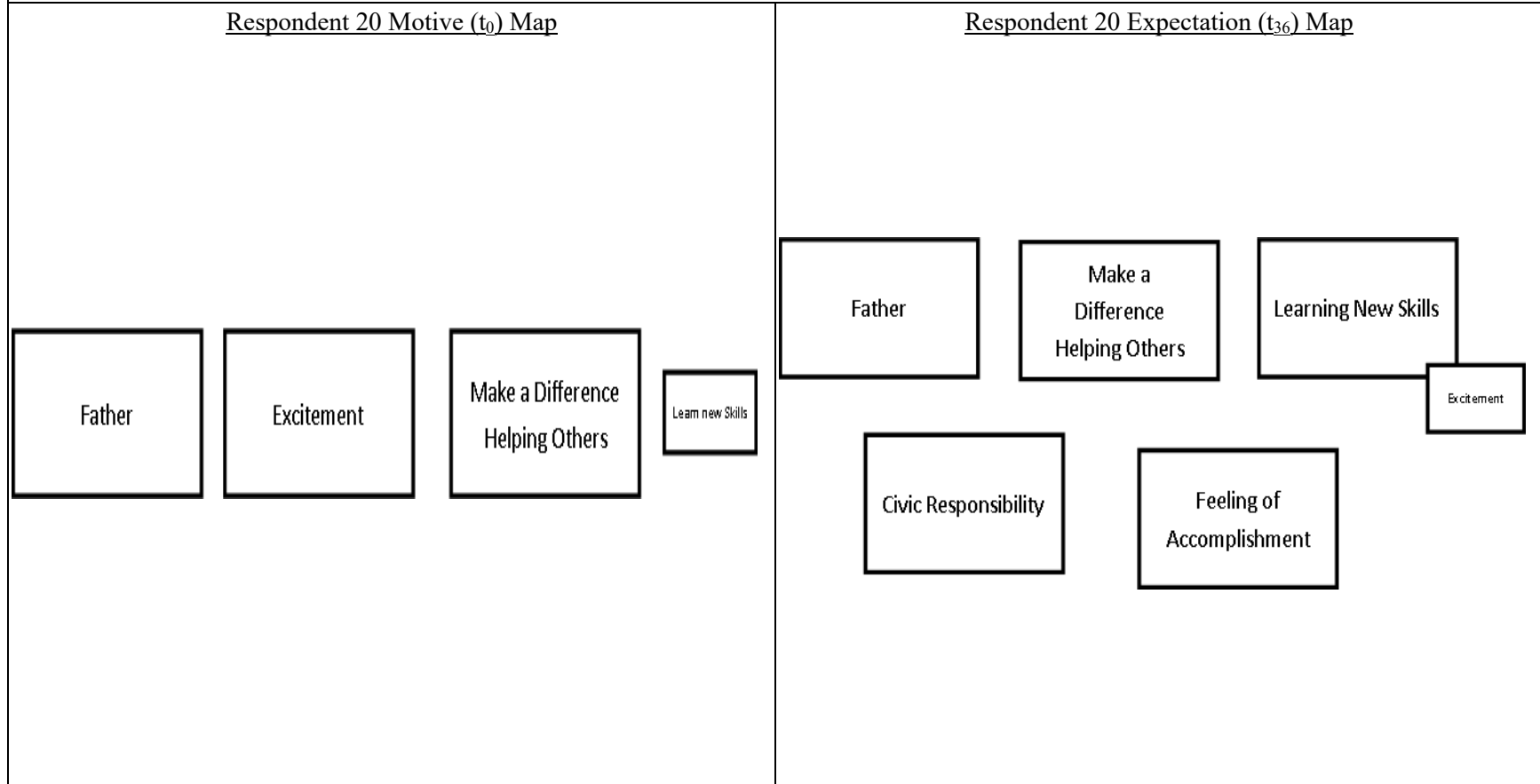
In lieu of focusing their efforts on social, protective or career factors, fire departments should focus on meeting values, enhancement, and understanding expectations, which represent the primary tier of importance overall with respect to retention. This analysis answers research question two, how do these *motives* alter and map to *expectations* for continued service. In the next chapter (Chapter 6), I analyzed satisfaction and retention associated with the expectations discussed in this chapter.

**Figure 5.1: Values Motive and Expectation Concept Maps**



Note: This concept map represents actual data from snowball sample respondent 8 as an example of a respondent with an importance emphasis on values motive to join. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

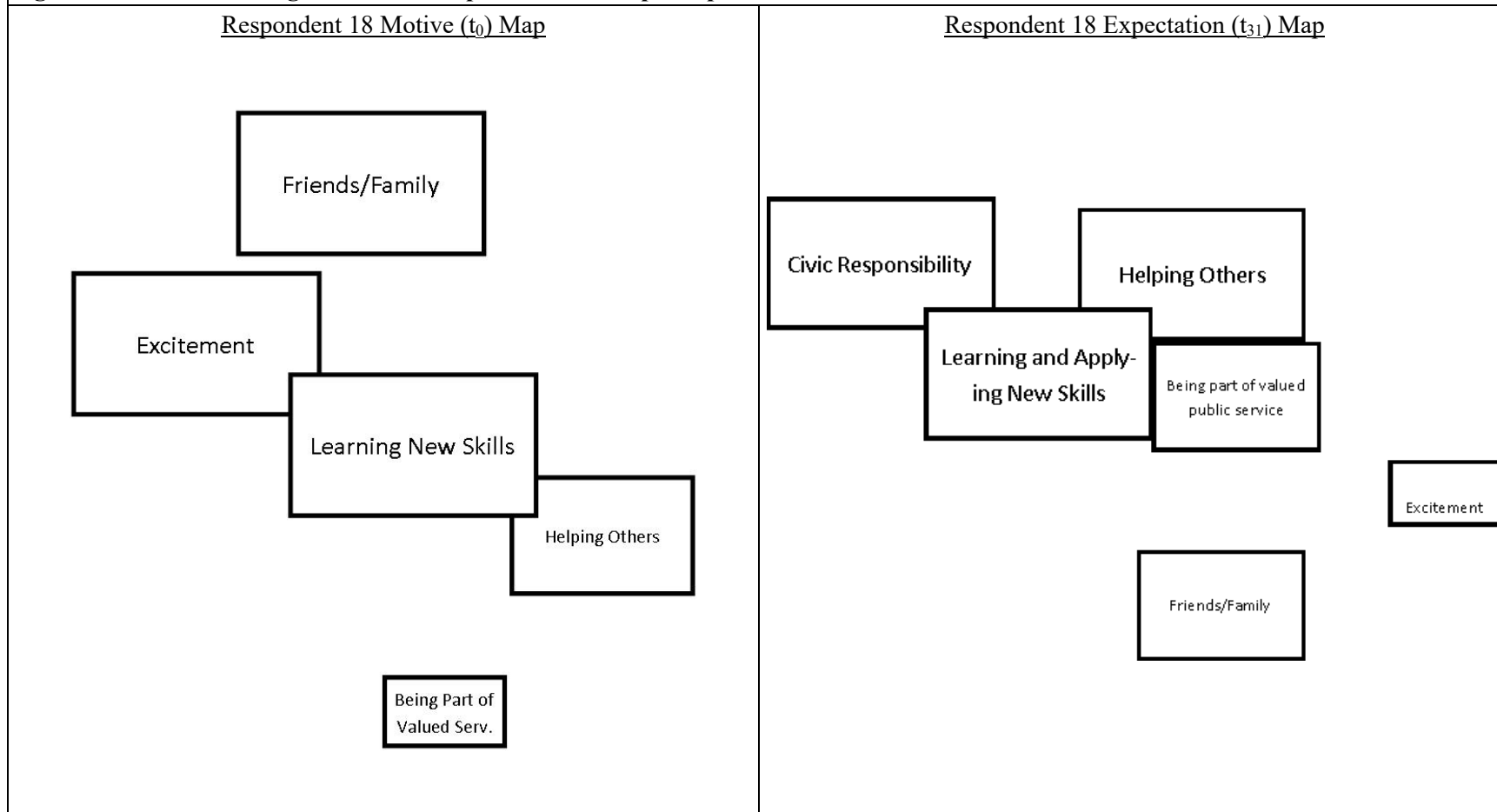
**Figure 5.2: Enhancement Motive and Expectation Concept Maps**



Note: This concept map represents actual data from snowball sample respondent 20 as an example of a respondent with an importance emphasis on enhancement motives to join. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

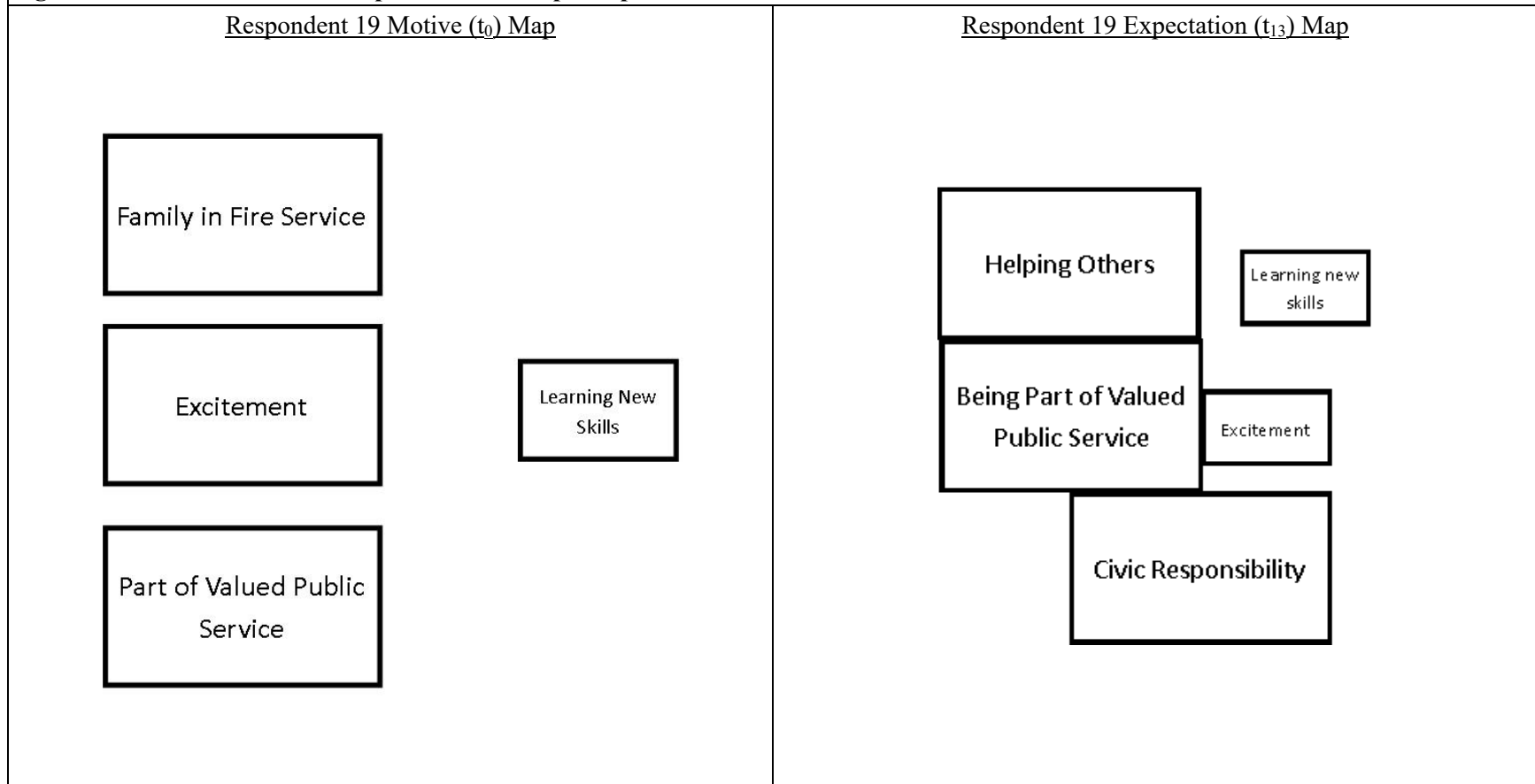


**Figure 5.3: Understanding Motive and Expectation Concept Maps**



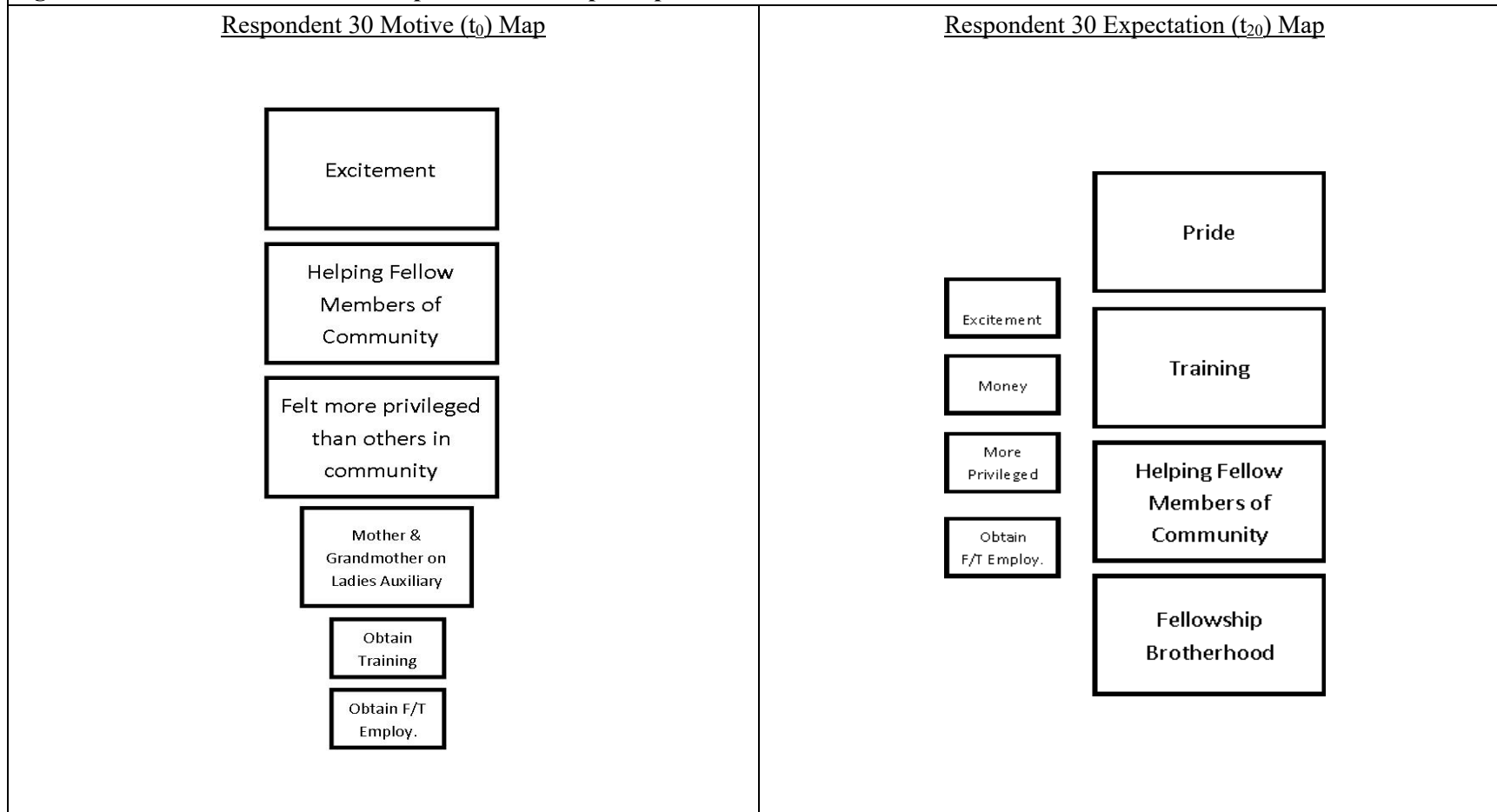
Note: This concept map represents actual data from snowball sample respondent 18 as an example of a respondent with an importance emphasis on understanding motives to join. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 5.4: Social Motive and Expectation Concept Maps**



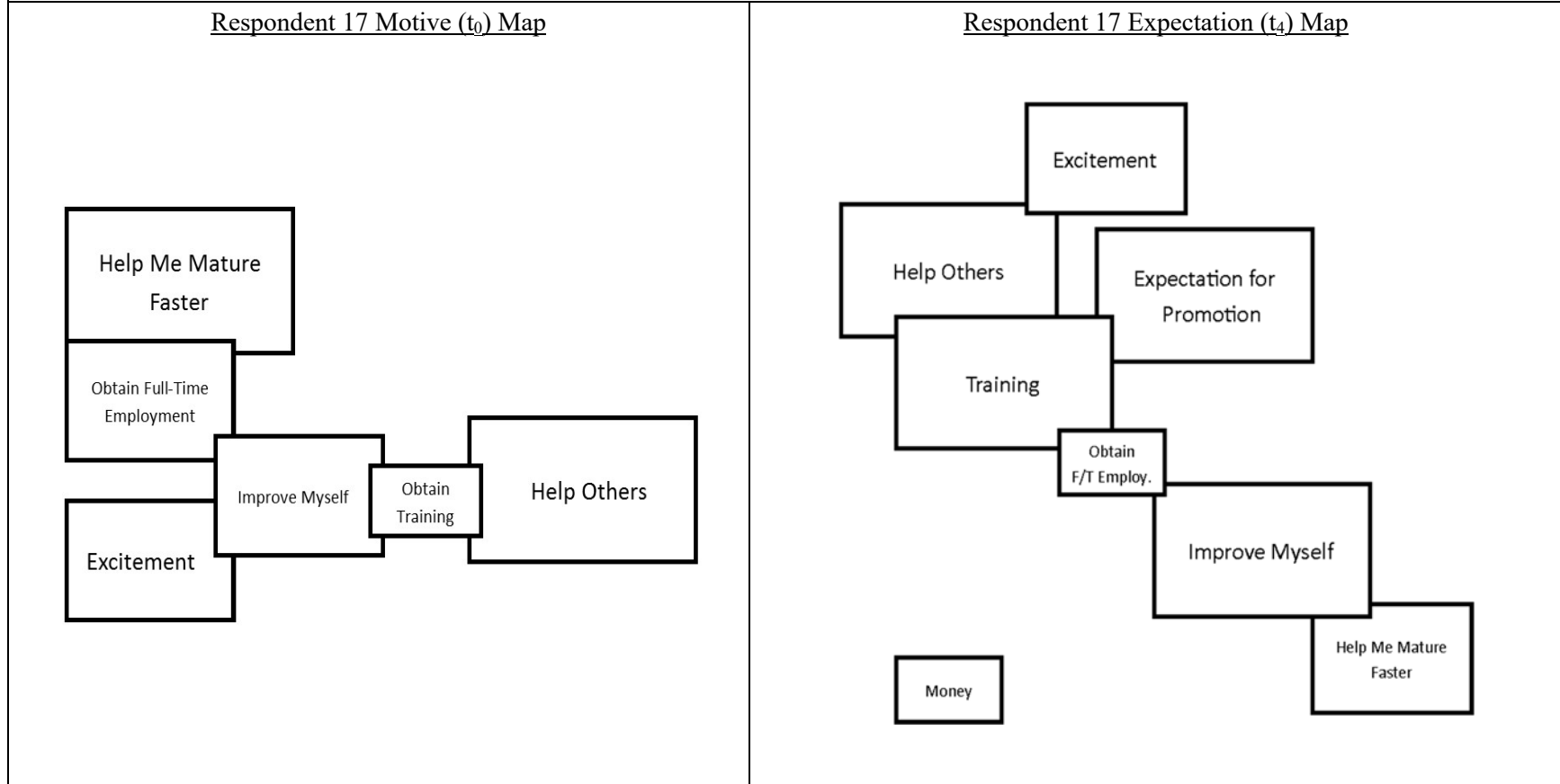
Note: This concept map represents actual data from snowball sample respondent 19 as an example of a respondent with an importance emphasis on social motives motives to join. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 5.5: Protective Motive and Expectation Concept Maps**



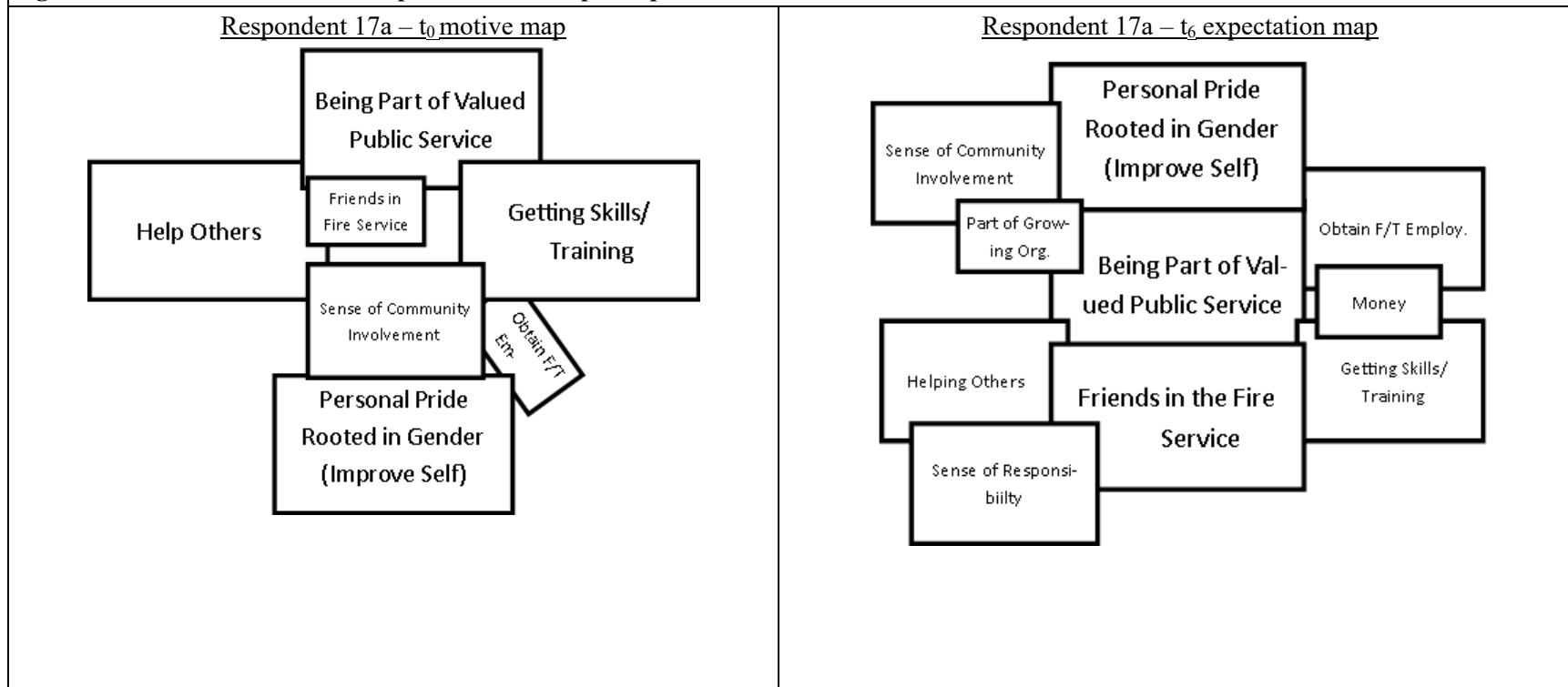
Note: This concept map represents actual data from snowball sample respondent 30 as an example of a respondent with an importance emphasis on protective motives to join. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 5.6: Career Motive and Expectation Concept Maps**



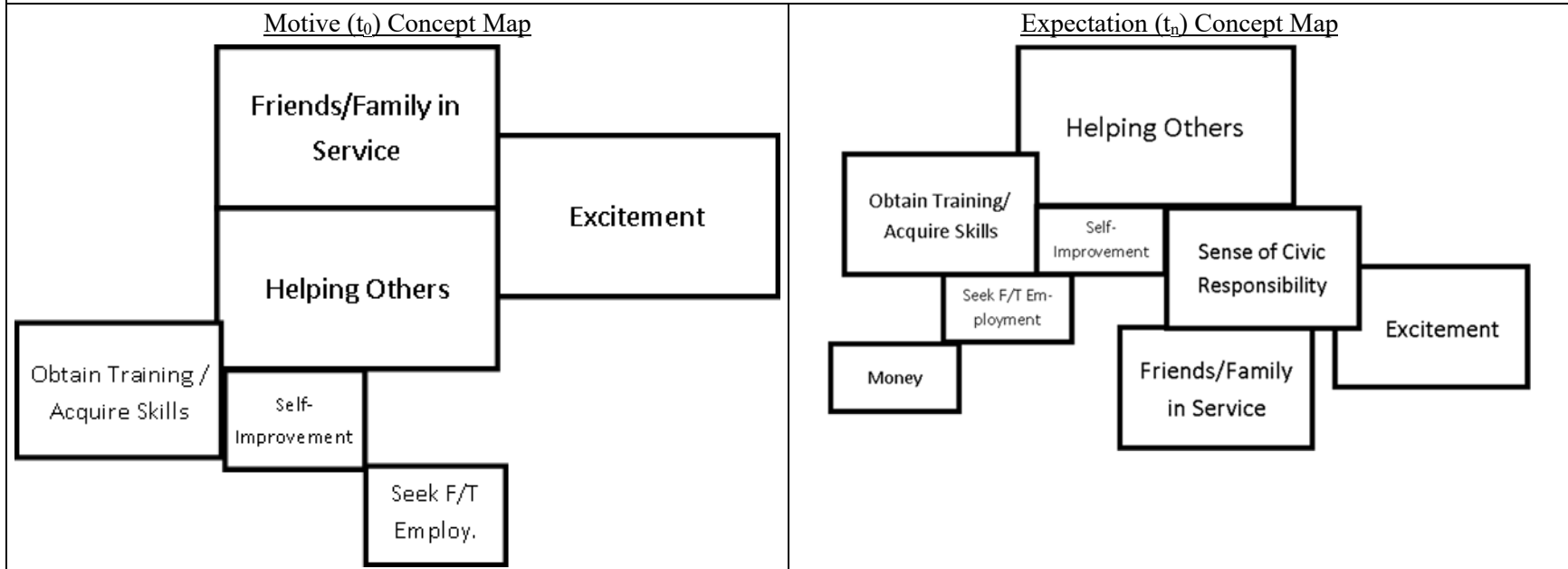
Note: This concept map represents actual data from snowball sample respondent 17 as an example of a respondent with an importance emphasis on career motives to join. Large boxes represent highly important motives, medium sized boxes represent moderately important motives, and motives represented by small boxes are those with low importance.

**Figure 5.7: Career Motive and Expectation Concept Maps**



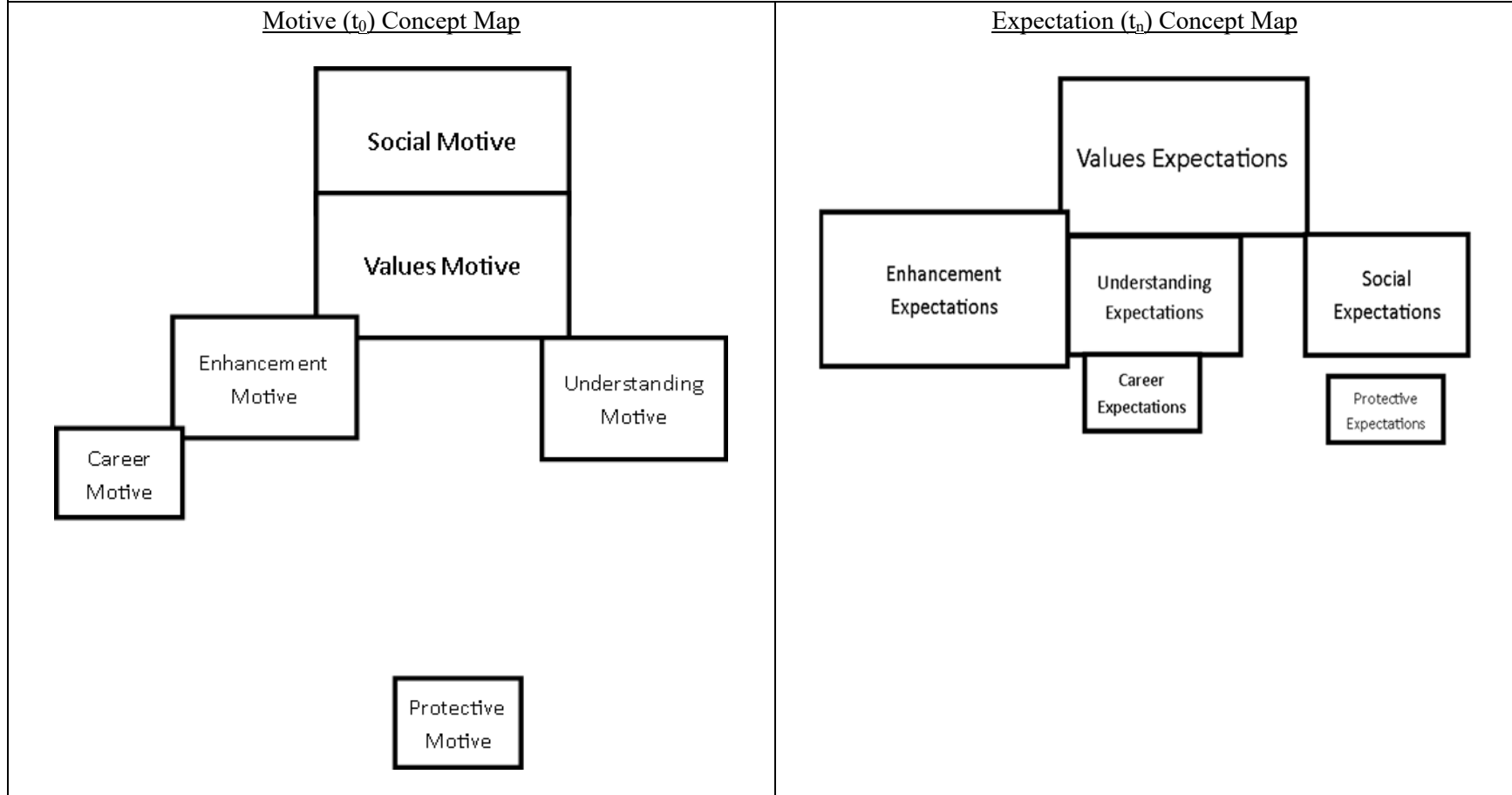
Note: These concept maps represent actual data from snowball sample respondent 17a as an example of a snowball respondent with emphasis on understanding motives and career expectations. Large boxes represent highly important motives/expectations, medium sized boxes represent moderately important motives/expectations, and motives/expectations represented by small boxes are those with low importance.

**Figure 5.8: Aggregated Individual Response Motive and Expectation Concept Map Comparison**



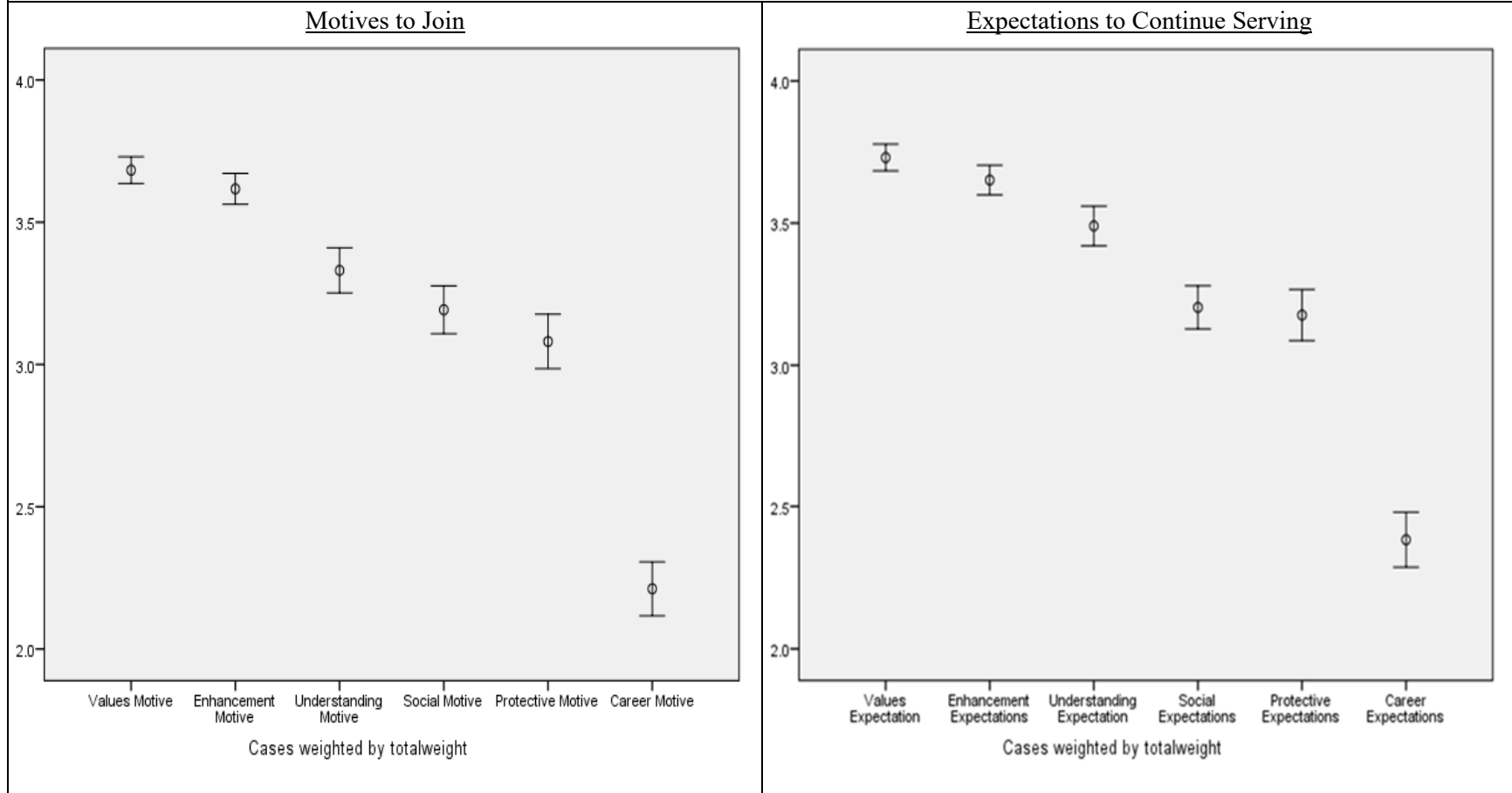
Note: These maps are the comparisons of the individual responses for motive and concept aggregate maps from interviews and concept maps with the snowball sample respondents. Large boxes represent highly important motives/expectations, medium sized boxes represent moderately important motives/expectations, and motives/expectations represented by small boxes are those with low importance.

**Figure 5.9: Aggregate Coded Motive and Expectation Concept Map Comparison**



Note: These maps are the comparisons of the coded for motive and concept aggregate maps from interviews and concept maps with the snowball sample respondents. Large boxes represent highly important motives/expectations, medium sized boxes represent moderately important motives/expectations, and motives/expectations represented by small boxes are those with low importance.

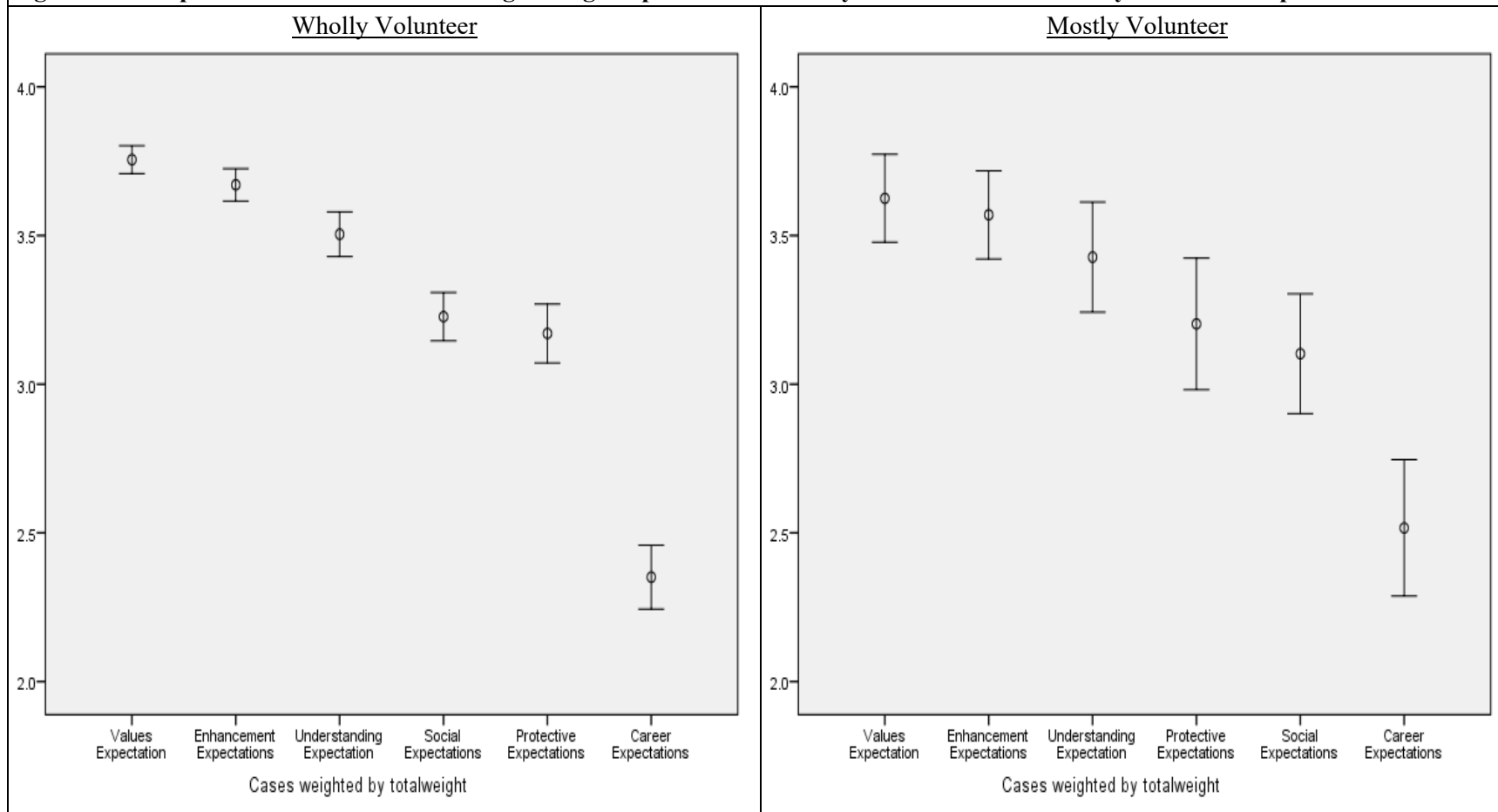
**Figure 5.10: Quantitative Motive – Expectation Comparison**



Note: These error bar plots represent the motives to join and expectations to continue serving quantitative results from the random sample respondents. n = 217. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. 95% Confidence Interval. Mean values were weighted according to the appropriate population weights.

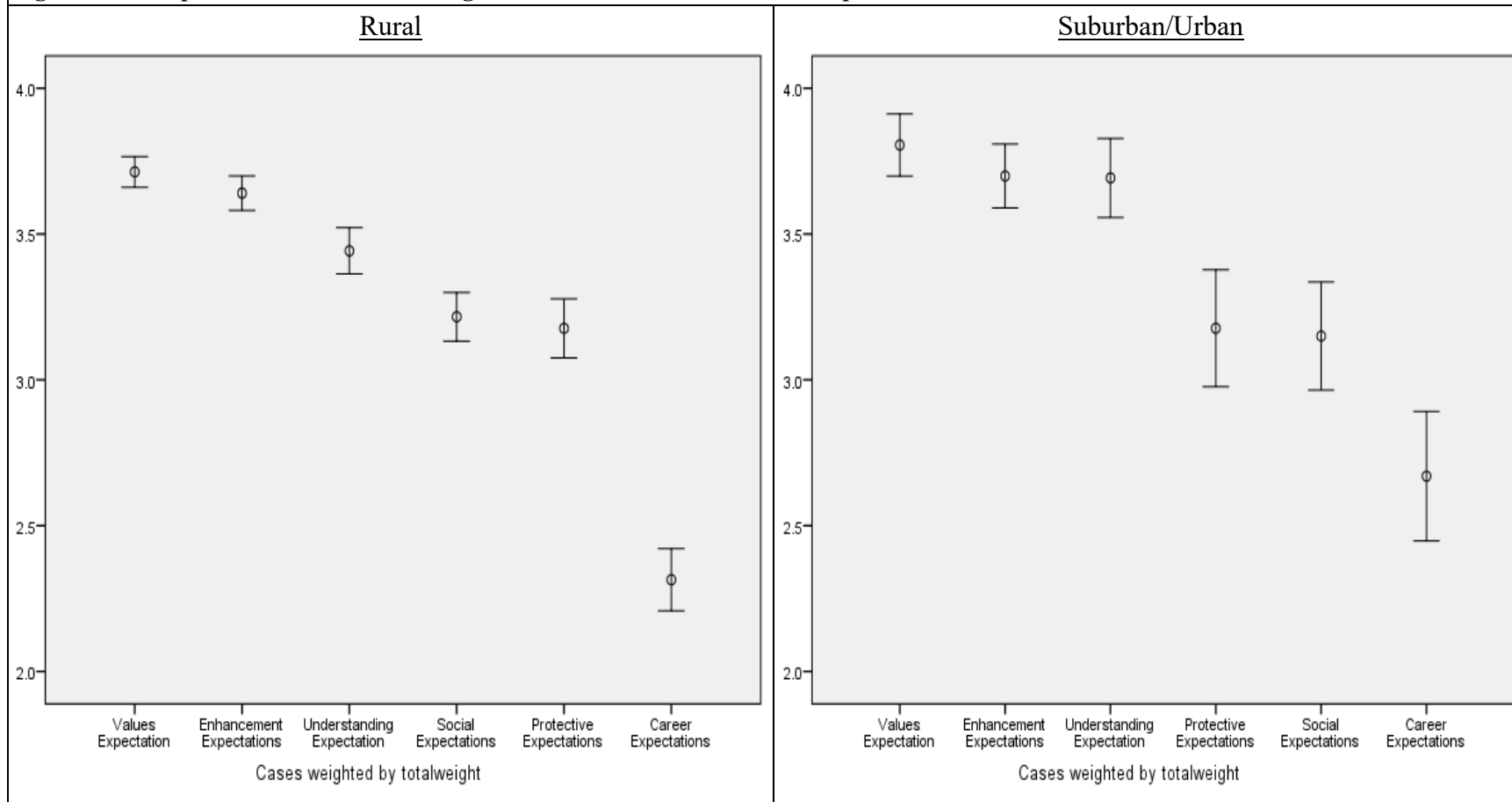


**Figure 5.11: Expectations to Continue Serving among Respondents in Wholly Volunteer versus Mostly Volunteer Departments**



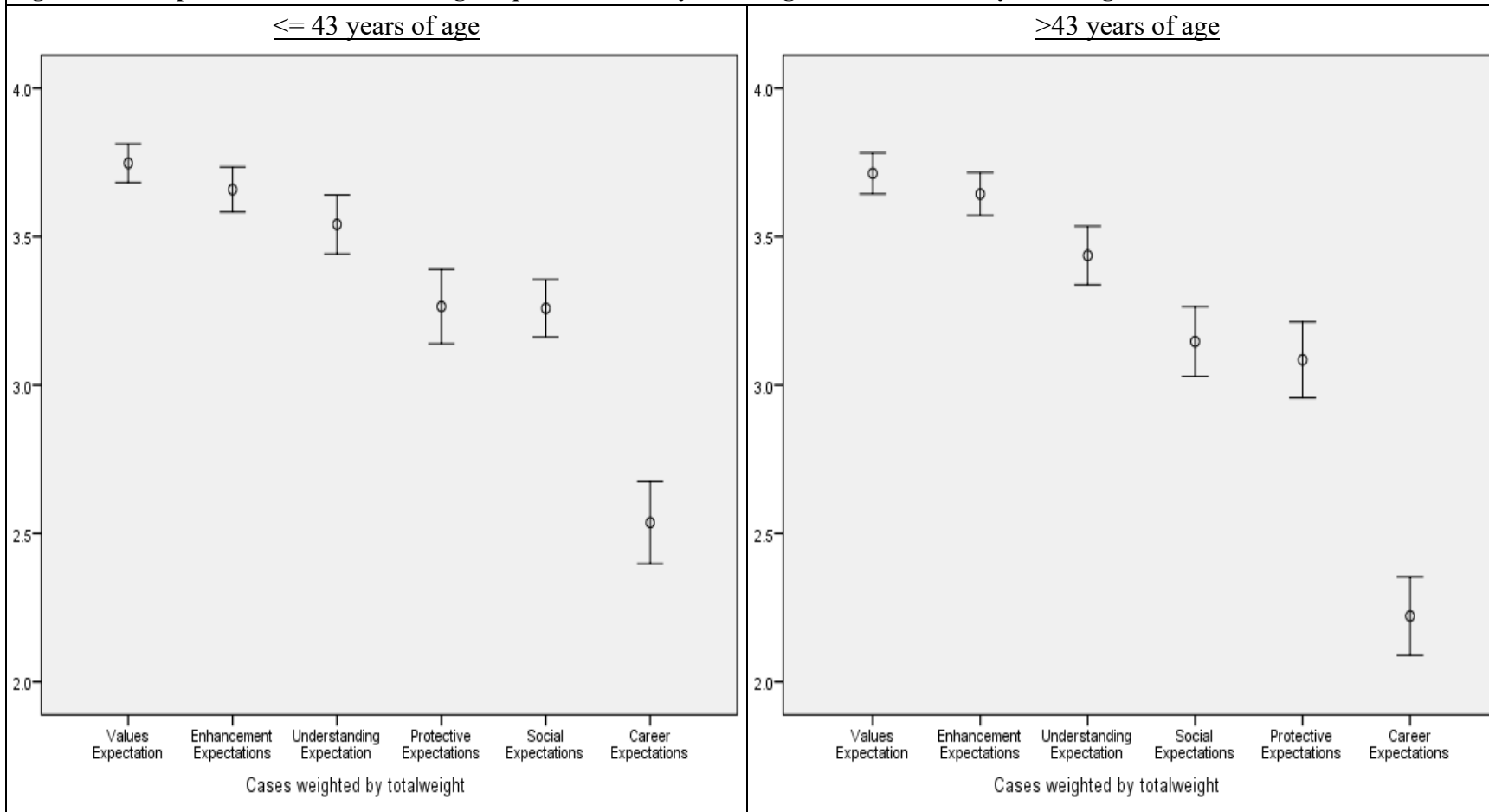
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Respondents in Wholly Volunteer Departments n = 111, respondents in Mostly Volunteer Departments n = 106. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 5.12: Expectations to Serve Among Rural and Suburban/ Urban Respondents**



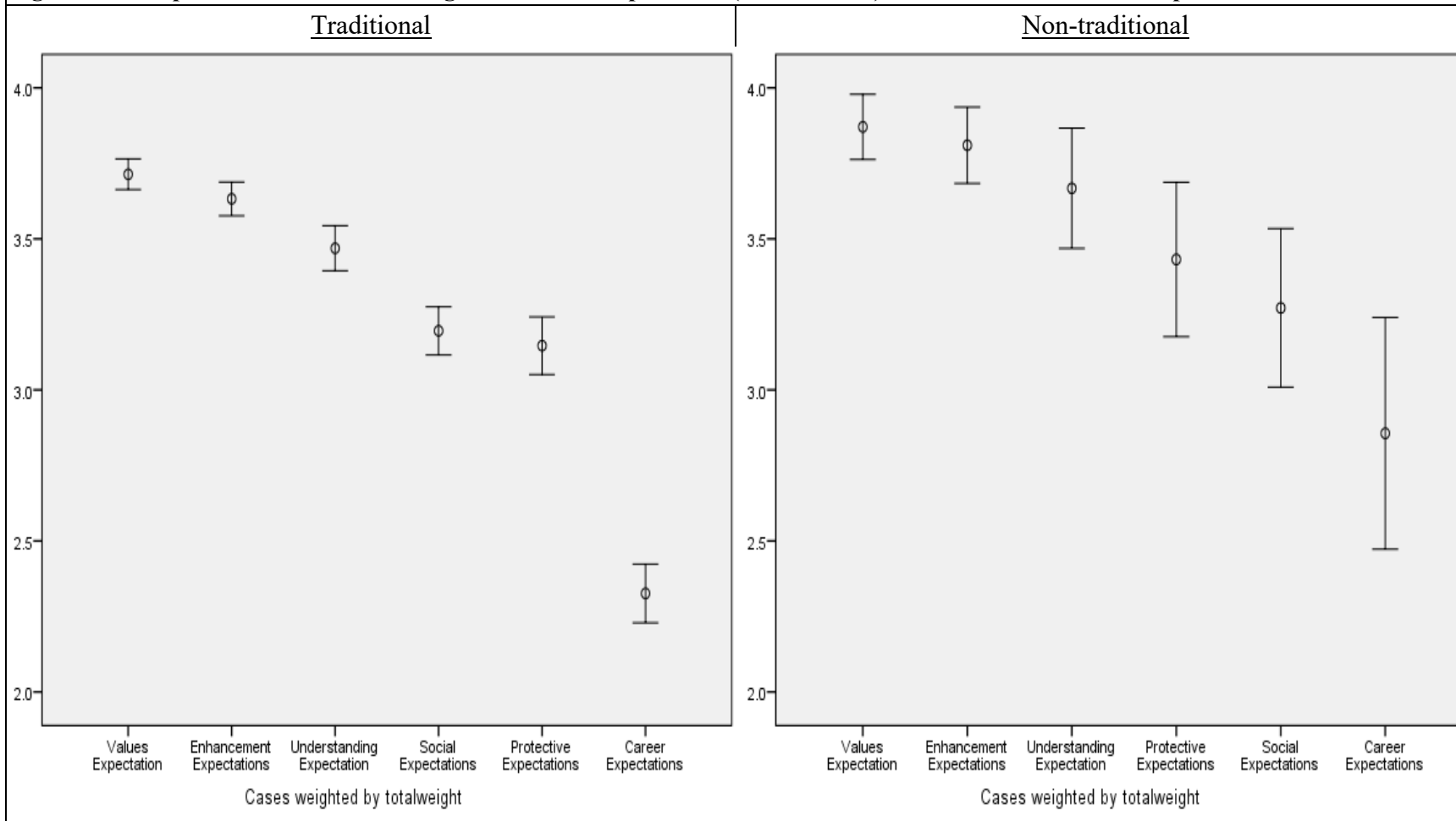
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Rural n = 158, Suburban/Urban n = 59,. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 5.13: Expectations to Serve Among Respondents ≤43 years of age versus those >43 years of age**



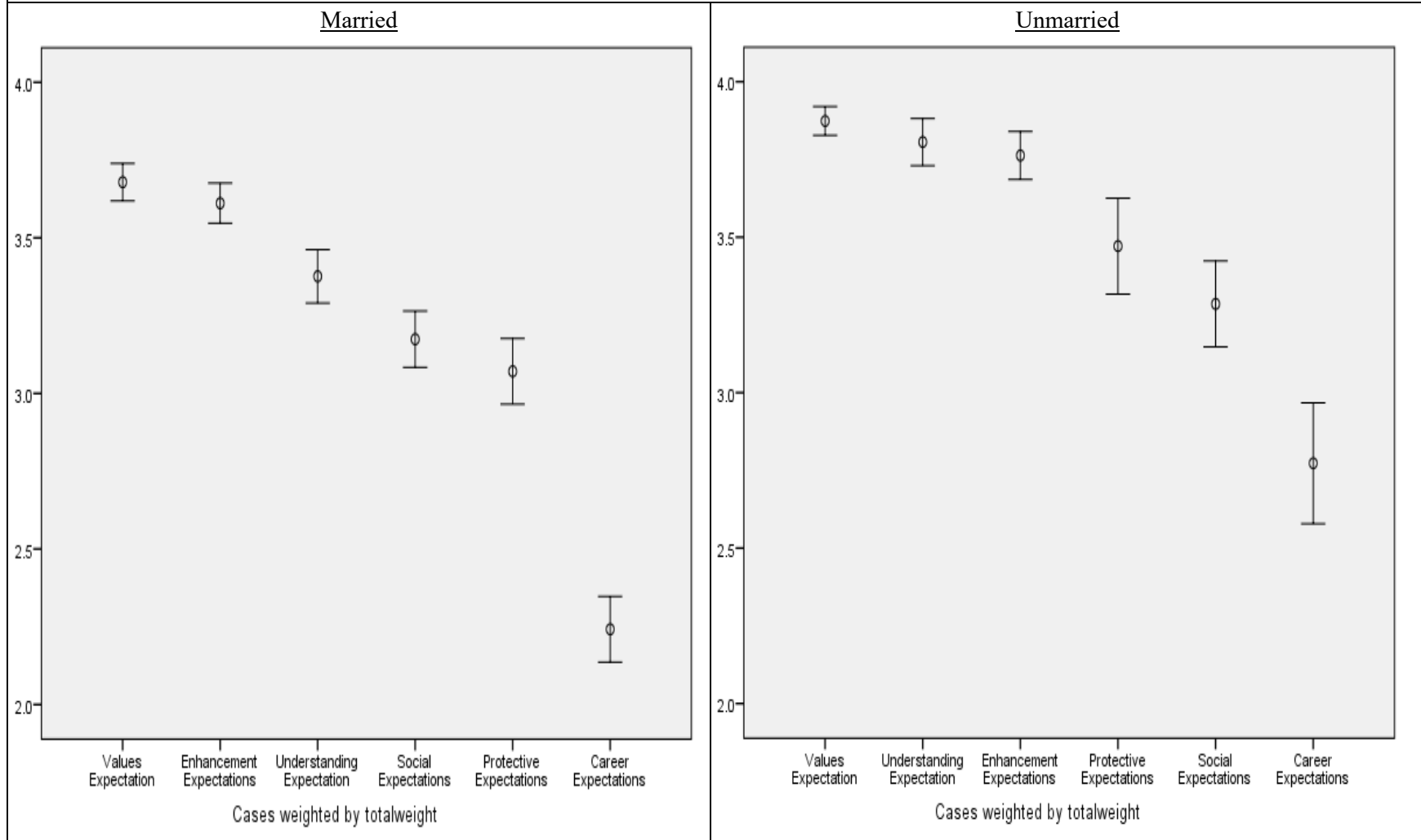
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Age ≤43 years = 120, Age >43 years = 97. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 5.14: Expectations to Serve Among Traditional Respondents (White Males) versus Non-traditional Respondents**



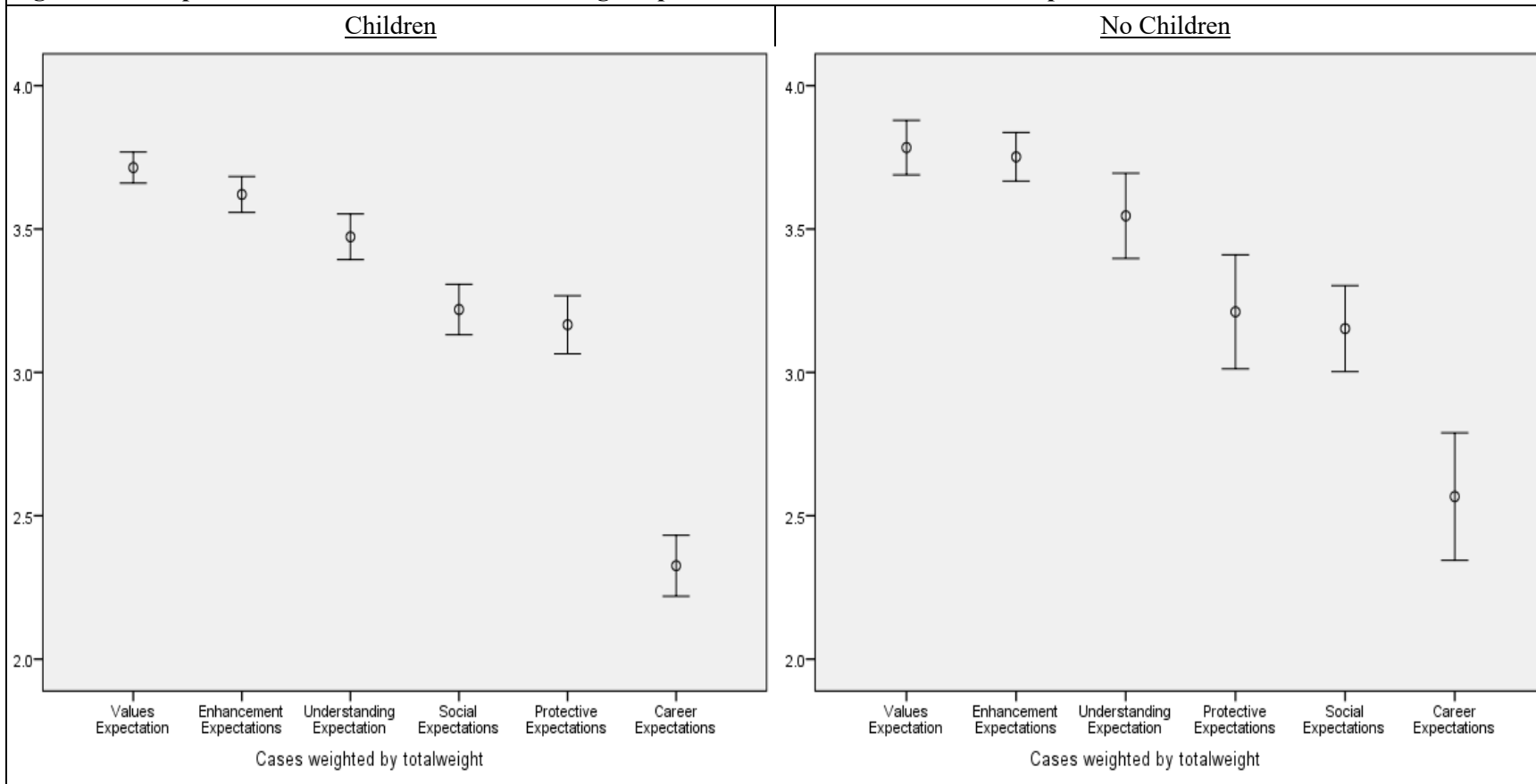
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. White male n = 161, respondents not white male n = 56. Confidence interval = 95%. Non-traditional respondents include any respondent that is not white and male. Mean values were weighted according to the appropriate population weights.

**Figure 5.15: Expectations to Continue Service Among Married versus Unmarried Respondents**



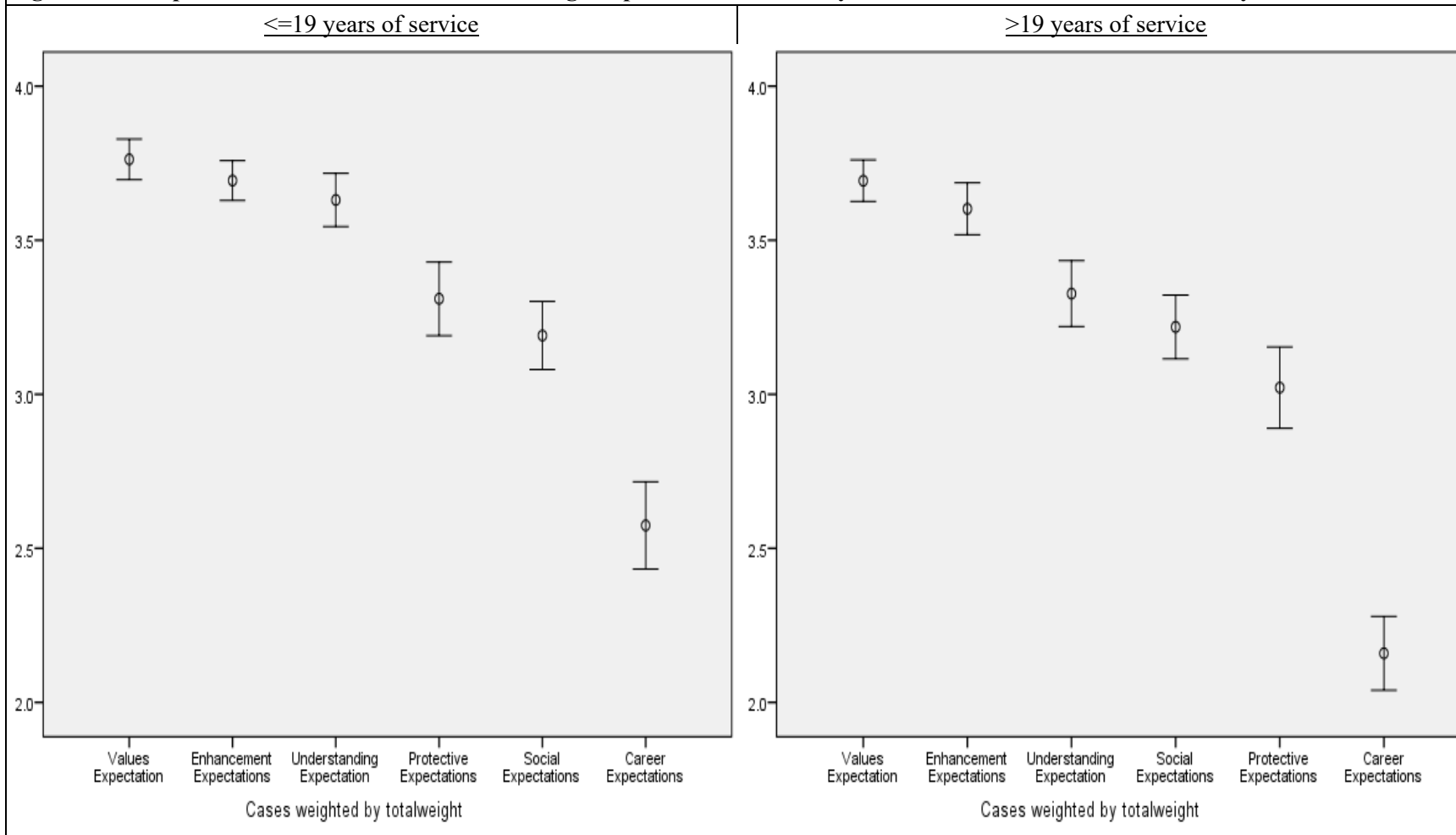
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Married n = 154, unmarried n = 63. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 5.16: Expectations to Continue Service Among Respondents with Children versus Respondents without Children**



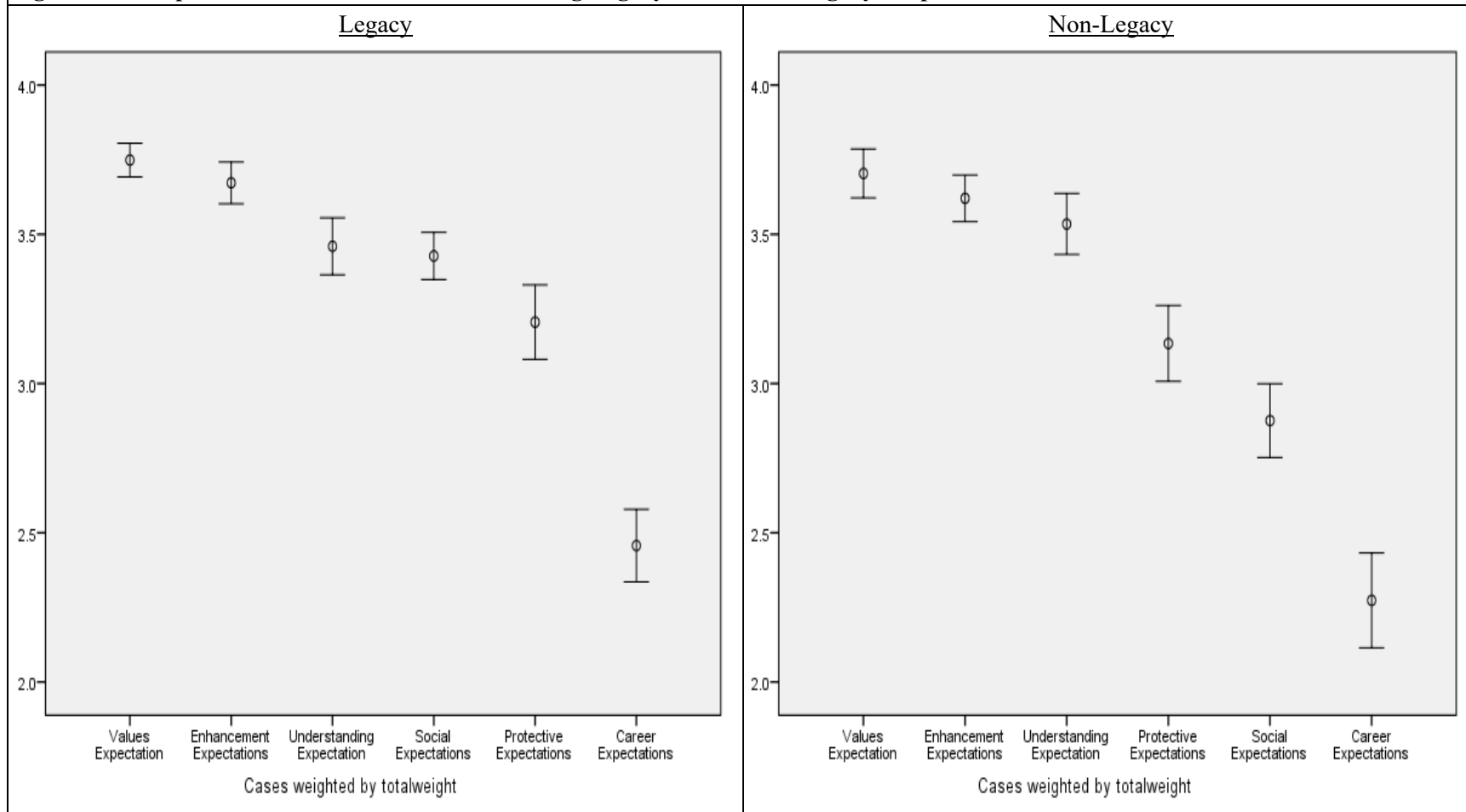
Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Respondents with Children n = 161, Respondents without Children n = 56. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 5.17: Expectations to Continue Service Among Respondents with  $\leq 19$  years of service versus those with  $>19$  years of service**



Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Respondents with  $\leq 19$  years of service n = 129, Respondents with  $>19$  years of service n = 88. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

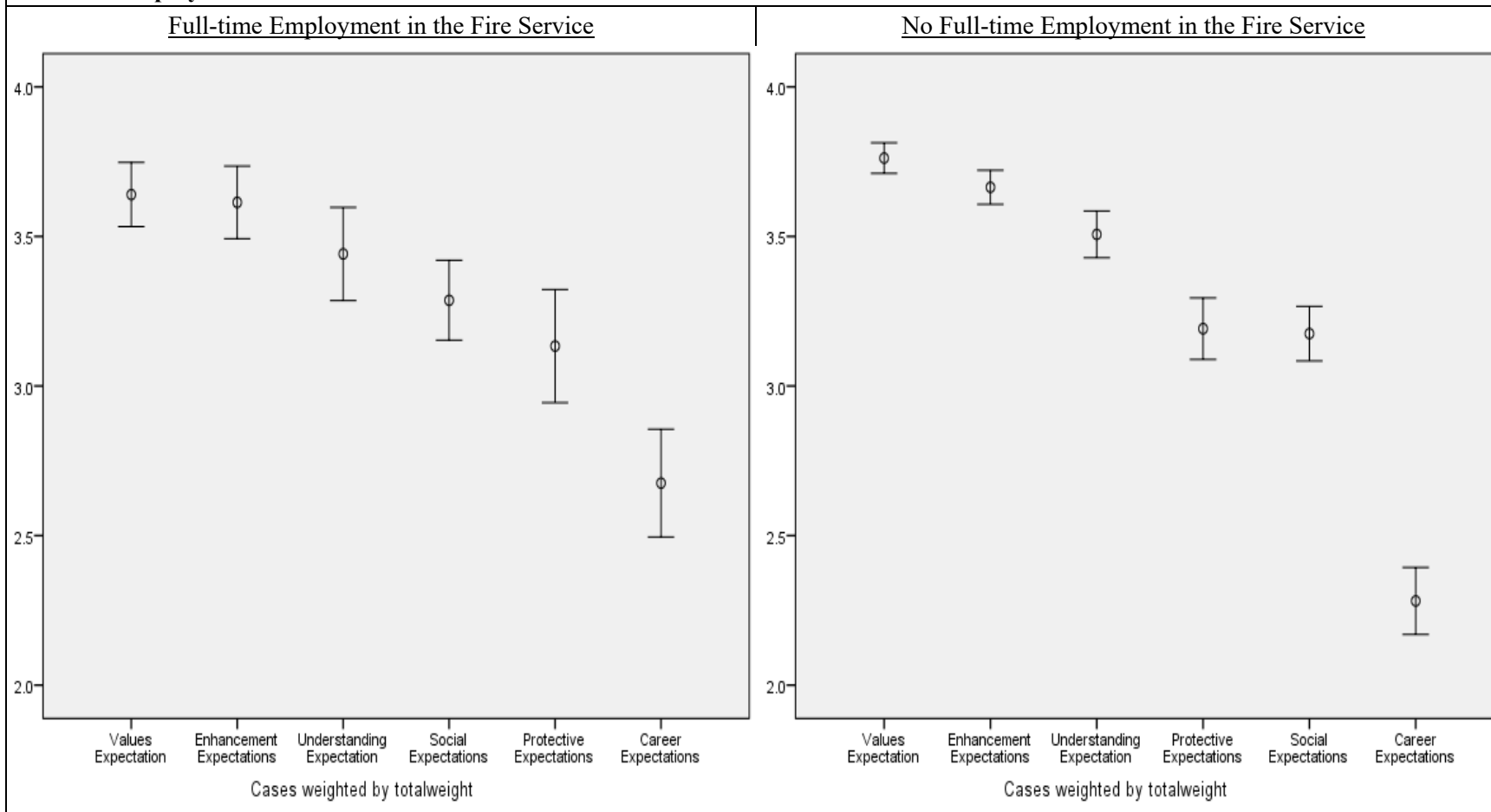
**Figure 5.18: Expectations to Continue Service Among Legacy versus Non-Legacy Respondents**



Note: Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Legacy n = 125, Non-legacy n = 92. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

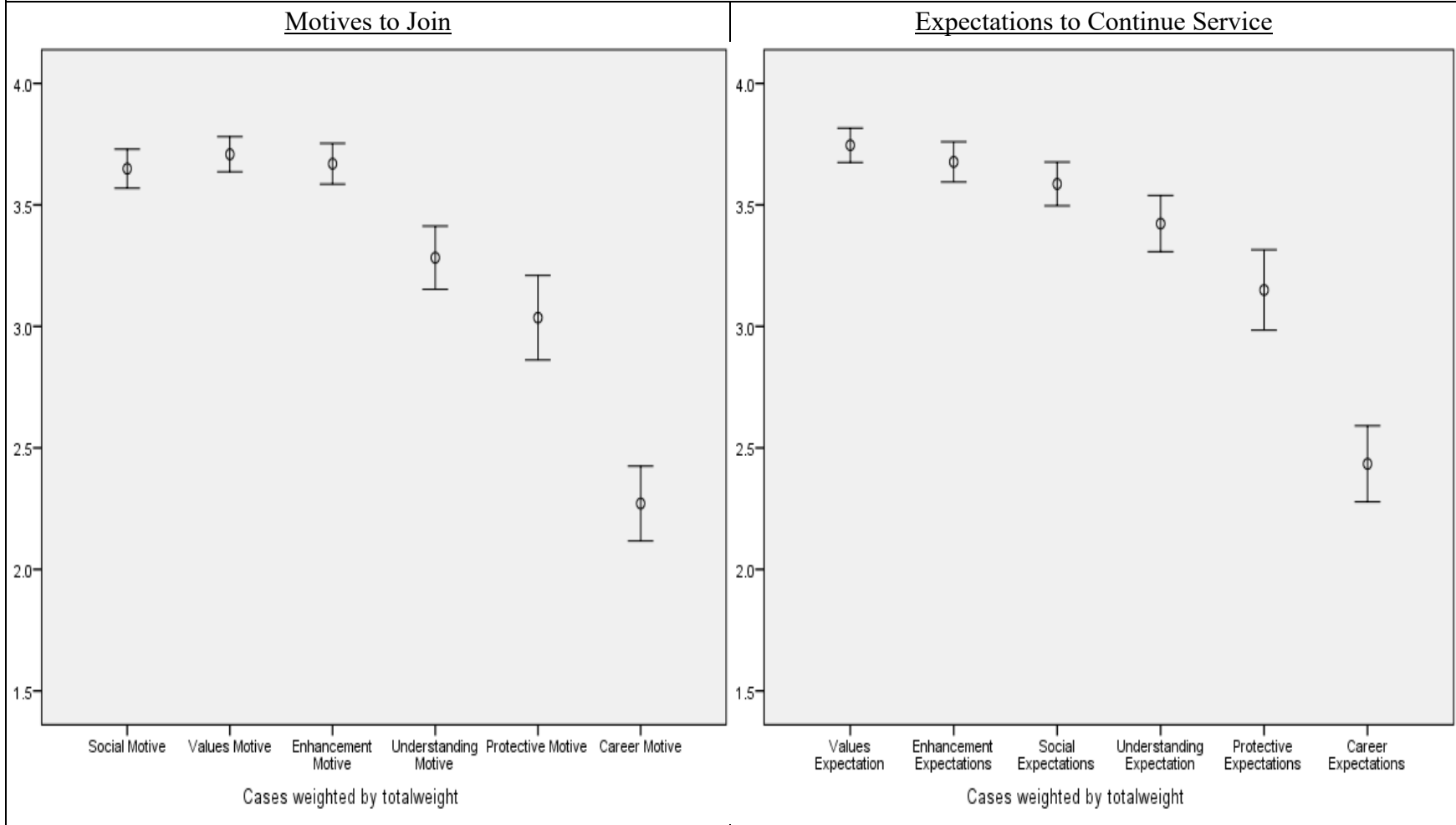


**Figure 5.19: Expectations to Continue Service among Respondents with Full-time Employment in the Fire Service versus those without Full-time Employment in the Fire Service**



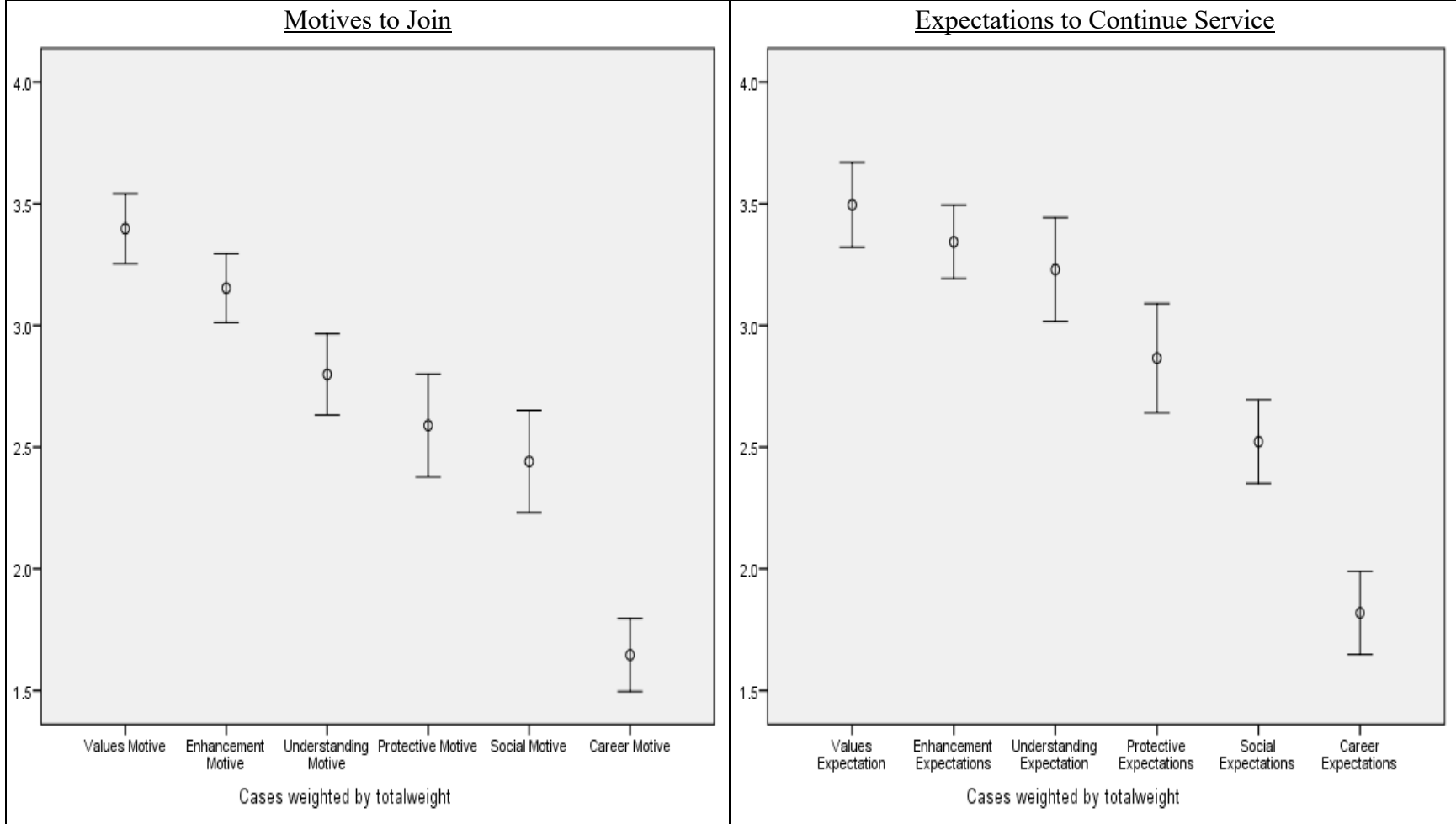
Results are from random sample respondents. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 217. Full-time employment in Fire Service n = 63, No Full-time employment in Fire Service n = 154. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 5.20: Factors for Family Firefighter Category of Joiner Motive/Expectation Comparison**



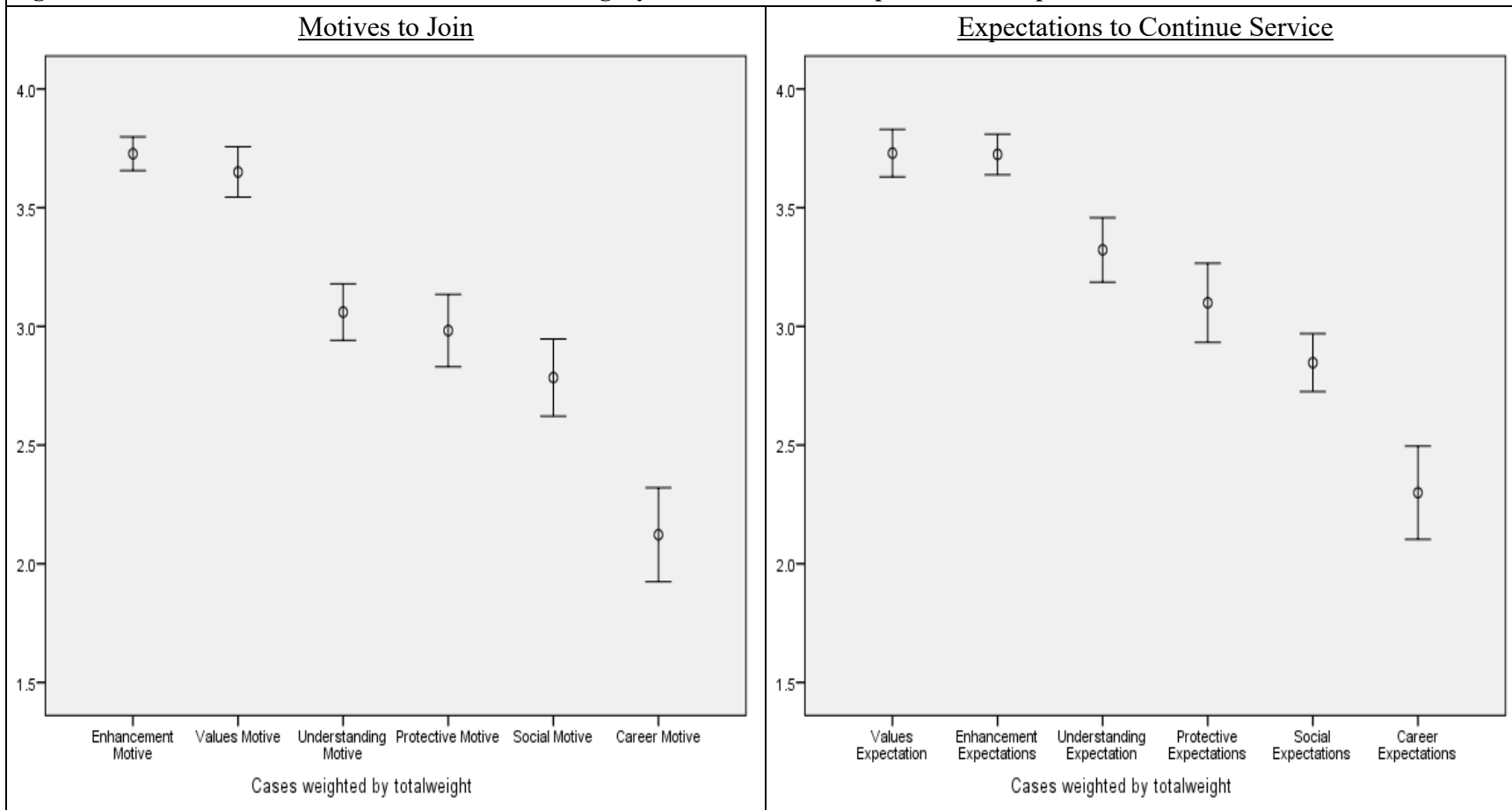
Note: This error bar plot represents the motives to join and expectations to continue service quantitative results from the random sample respondents, family firefighter category of joiner subset. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 85. Confidence interval = 95%.

**Figure 5.21: Factors for Altruist Category of Joiner Motive/Expectation Comparison**



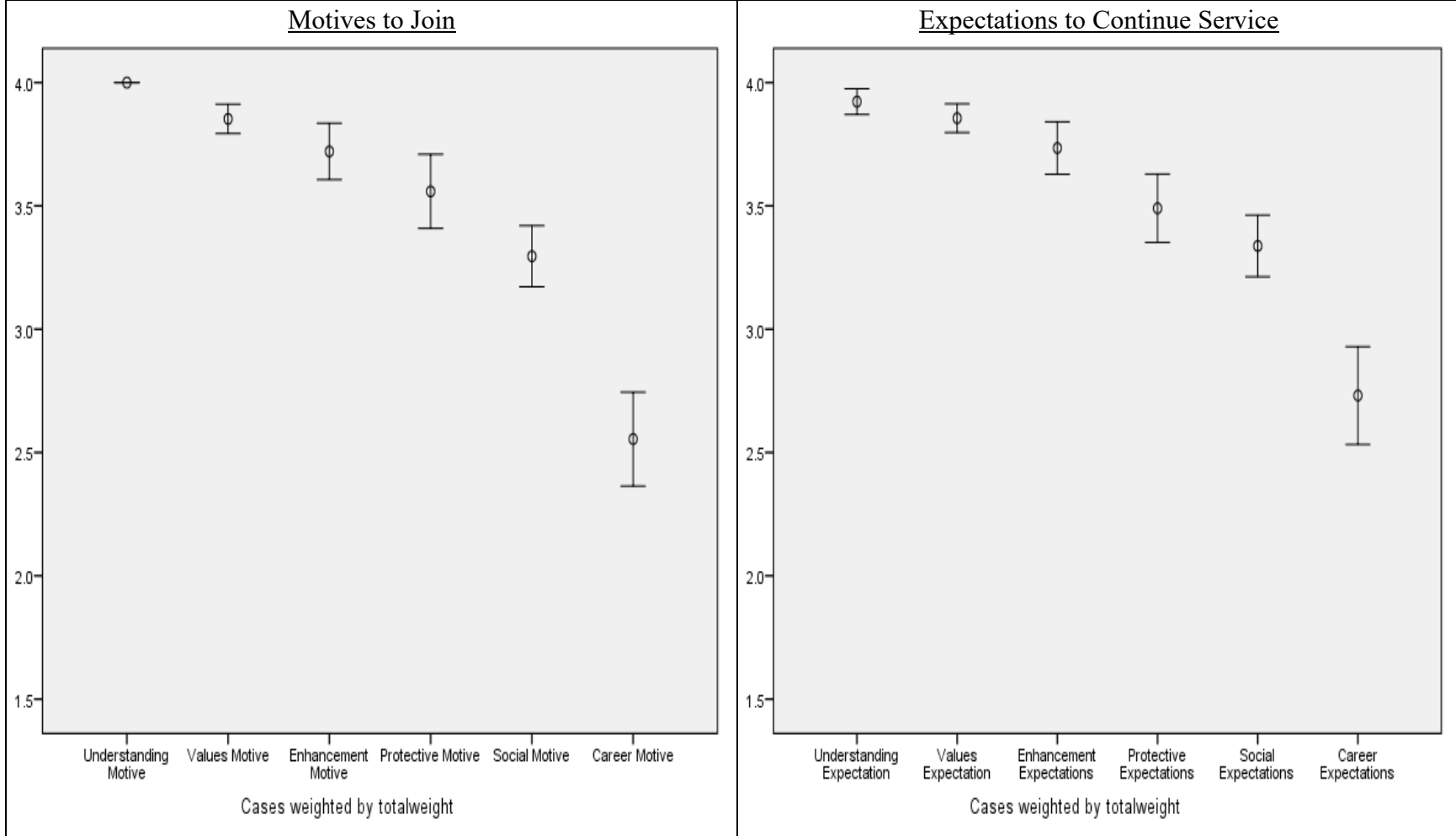
Note: This error bar plot represents the motives to join and expectations to continue service quantitative results from the random sample respondents, altruist category of joiner subset. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 40. Confidence interval = 95%.

**Figure 5.22: Factors for Excitement/Risk Junkie Category of Joiner Motive/Expectation Comparison**



Note: This error bar plot represents the motives to join and expectations to continue service quantitative results from the random sample respondents, excitement/risk junkie category of joiner subset. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 45. Confidence interval = 95%.

**Figure 5.23: Factors for Learner Category of Joiner Motive/Expectation Comparison**



Note: This error bar plot represents the motives to join and expectations to continue service quantitative results from the random sample respondents, learner category of joiner subset. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. n = 47. Confidence interval = 95%.

**Table 5.1: Factor and Qualitative Individual Responses**

<u>Factor</u>	<u>Individual Response</u>
Values	Helping Others
	Payback the Community
	Sense of Civic Responsibility
	Teaching Children About Helping Others (Role Model)
Enhancement	Helping Others in the Department (Teaching)
	Excitement
	Being Part of Valued Public Service
	Self-Improvement
	Pride
	Help Me Mature Faster
	Expectation for Promotion
	Feeling of Accomplishment
	Being Part of Growing Organization
	Understanding
Obtaining Training	
Social	Family/Friends in Service
	Fellowship/Brotherhood
	Sense of Belonging
	Family Tradition of Volunteering (Non-Fire Department Related)
Protective	Sense of Community Involvement
	Having Resources Others Do Not
Career	Seeking Full-Time Employment
	Money
Miscellaneous	Sofa Super Store Fire
	Fascination with the Fire Service
	Equipment Provided to Perform Service
	Working with Others Toward a Common Goal

Note: Individual responses were included if one or more snowball sample respondents indicated the factor was important. Clary, et al. (1998) factors were established in the literature review. Individual responses were from the snowball sample interviews and expectation concept maps.

<u>Expectation to Continue Serving</u>	<u>Clary, et al. (1998) Factor</u>	<u>Min.</u>	<u>Max.</u>	<u>Mean</u>	<u>Std. Dev.</u>
Helping others	Values	1	4	3.87	0.371
Civic responsibility	Values	2	4	3.82	0.454
Feeling of accomplishment	Enhancement	2	4	3.69	0.536
Being member of a valued public service	Enhancement	1	4	3.67	0.543
Obtaining training	Understanding	1	4	3.66	0.552
Fellowship	Social	1	4	3.62	0.574
Excitement	Enhancement	1	4	3.59	0.646
Serving as role model	Values	1	4	3.50	0.716
Acquiring skills	Understanding	1	4	3.32	0.818
Possessing sufficient resources to volunteer	Protective	1	4	3.28	0.840
Payback the community for own successes	Protective	1	4	3.07	0.939
Close friend/family member	Social	1	4	3.05	1.019
Acquaintance	Social	1	4	2.94	1.079
Networking with community and business leaders	Career	1	4	2.88	0.988
Gaining employment	Career	1	4	2.46	1.127
Supplemental income	Career	1	4	1.81	1.090

Note: n = 217. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.

**Table 5.3: Quantitative Survey Coded Responses by Expectation Factor**

<u>Expectation</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Mean</u>	<u>Std. Dev.</u>
Values	2.00	4.00	3.73	.385
Enhancement	1.67	4.00	3.65	.426
Understanding	1.00	4.00	3.49	.572
Social	1.00	4.00	3.20	.620
Protective	1.00	4.00	3.18	.735
Career	1.00	4.00	2.38	.793

Note: n = 217. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.



**Table 5.4: Quantitative Individual Motive / Expectation Importance Response Comparison**

<u>Individual Response as Motive / Expectation</u>	<u>Clary, et al. (1998) Factor</u>	<u>Motive to Join</u>		<u>Expectation to Continue Serving</u>		<u>Change from Motive</u>
		<u>Mean</u>	<u>Std. Dev.</u>	<u>Mean</u>	<u>Std. Dev.</u>	
Helping others	Values	3.93	0.262	3.87	0.371	-0.06
Civic responsibility	Values	3.80	0.449	3.82	0.454	+0.02
Being member of a valued public service	Enhancement	3.66	0.550	3.67	0.543	+0.01
Feeling of accomplishment	Enhancement	3.61	0.634	3.69	0.536	+0.08
Excitement	Enhancement	3.58	0.695	3.59	0.646	+0.01
Fellowship	Social	3.55	0.628	3.62	0.574	+0.07
Obtaining training	Understanding	3.52	0.673	3.66	0.552	+0.14
Serving as role model	Values	3.32	0.851	3.50	0.716	+0.18
Possessing sufficient resources to volunteer	Protective	3.16	0.927	3.28	0.840	+0.12
Acquiring skills	Understanding	3.14	0.891	3.32	0.818	+0.18
Close friend/family member	Social	3.04	1.097	3.05	1.019	+0.01
Payback the community for own successes	Protective	3.00	0.958	3.07	0.939	+0.07
Acquaintance	Social	2.98	1.087	2.94	1.079	-0.04
Networking with community and business leaders	Career	2.69	0.981	2.88	0.988	+0.19
Gaining employment	Career	2.29	1.119	2.46	1.127	+0.17
Supplemental income	Career	1.66	1.000	1.81	1.090	+0.15

Note: n = 217. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.

**Table 5.5: Quantitative Survey Coded Responses Motive/Expectation Comparison by Factor**

<u>Motive / Expectation</u>	<u>Motive to Join</u>		<u>Expectation to Continue Serving</u>		<u>Change from Motive</u>
	<u>Mean</u>	<u>Std. Dev.</u>	<u>Mean</u>	<u>Std. Dev.</u>	
Values factors	3.68	.385	3.73	.385	+0.05
Enhancement factors	3.62	.446	3.65	.426	+0.03
Understanding factors	3.33	.647	3.49	.572	+0.16
Social factors	3.19	.686	3.20	.620	+0.01
Protective factors	3.08	.783	3.18	.735	+0.10
Career factors	2.21	.775	2.38	.793	+0.17

Note: n = 217. A score of 1 = not important, 2 = low importance, 3 = moderate importance, 4 = high importance. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.

<u>Control</u>	<u>n</u>	<u>Values</u> <u>Expectations</u>	<u>Understanding</u> <u>Expectations</u>	<u>Career</u> <u>Expectations</u>	<u>Social</u> <u>Expectations</u>	<u>Protective</u> <u>Expectations</u>	<u>Enhancement</u> <u>Expectations</u>
Mostly Volunteer Dept	111	3.63	3.43	2.52	3.10	3.20	3.57
Wholly Volunteer Dept	106	3.76	3.50	2.35	3.23	3.17	3.67
Rural Pop. Served	158	3.71	<b><u>3.44</u></b>	<b><u>2.31</u></b>	3.22	3.18	3.64
Suburban/Urban Pop. Served	59	3.74	<b><u>3.63</u></b>	<b><u>2.45</u></b>	2.93	3.07	3.66

Note: A score of 0 = Not Important, 1 = Low Importance, 2 = Moderate Importance, 3 = High Importance. Bolded/Underlined scores represent statistically significantly difference of means. Results are from random sample respondents

<u>Control</u>	<u>n</u>	<u>Values</u> <u>Expectations</u>	<u>Understanding</u> <u>Expectations</u>	<u>Career</u> <u>Expectations</u>	<u>Social</u> <u>Expectations</u>	<u>Protective</u> <u>Expectations</u>	<u>Enhancement</u> <u>Expectations</u>
Age <= 43	120	3.75	3.54	<b><u>2.54</u></b>	3.26	<b><u>3.26</u></b>	3.66
Age >43	97	3.71	3.44	<b><u>2.22</u></b>	3.15	<b><u>3.08</u></b>	3.64
Traditional (White male)	161	<b><u>3.71</u></b>	3.47	<b><u>2.33</u></b>	3.20	3.15	<b><u>3.63</u></b>
Non-traditional	56	<b><u>3.87</u></b>	3.67	<b><u>2.86</u></b>	3.27	3.43	<b><u>3.81</u></b>
Married	154	<b><u>3.68</u></b>	<b><u>3.38</u></b>	<b><u>2.24</u></b>	3.17	<b><u>3.07</u></b>	<b><u>3.61</u></b>
Unmarried	63	<b><u>3.87</u></b>	<b><u>3.81</u></b>	<b><u>2.77</u></b>	3.29	<b><u>3.47</u></b>	<b><u>3.76</u></b>
Children	161	3.71	3.47	<b><u>2.33</u></b>	3.22	3.17	<b><u>3.62</u></b>
No Children	56	3.78	3.55	<b><u>2.57</u></b>	3.15	3.21	<b><u>3.75</u></b>
Years of Service <= 19	129	3.76	<b><u>3.63</u></b>	<b><u>2.57</u></b>	3.19	<b><u>3.31</u></b>	3.69
Years of Service >19	88	3.69	<b><u>3.33</u></b>	<b><u>2.16</u></b>	3.22	<b><u>3.02</u></b>	3.60
Legacy Firefighter	125	3.75	3.46	2.46	<b><u>3.43</u></b>	3.21	3.67
Non-Legacy Firefighter	92	3.70	3.53	2.27	<b><u>2.88</u></b>	3.13	3.62
Continuous Service	187	3.73	3.50	2.38	3.23	3.19	3.64
Intermittent Service	30	3.74	3.38	2.44	2.99	3.08	3.79
FTE in Fire Service	63	<b><u>3.64</u></b>	3.44	<b><u>2.68</u></b>	3.29	3.13	3.61
No FTE in Fire Service	154	<b><u>3.76</u></b>	3.51	<b><u>2.28</u></b>	3.18	3.19	3.66

Note: A score of 0 = Not Important, 1 = Low Importance, 2 = Moderate Importance, 3 = High Importance. Bolded/Underlined scores represent statistically significant difference of means. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.

## CHAPTER VI

### UNDERSTANDING VOLUNTEER FIREFIGHTERS' SATISFACTION AND RETENTION

Chapters 4 and 5 analyzed the importance of motives to join and expectations to continue service respectively. This research also sought to determine levels of satisfaction among volunteer firefighters. Recall that I conceptualize satisfaction as a product of having one's expectations met. Without being satisfied, volunteer firefighters are likely to disengage from the service. This made assessing the levels of satisfaction among volunteer firefighters of paramount importance. Knowing if volunteer firefighters are satisfied with their expectations is only the first step. Determining the effects of these different factors on member retention is really the end goal of this dissertation. This chapter thus examines both the resulting levels of satisfaction versus the different expectation categories and it models volunteers' retention calculi versus initial motives, informed expectation and alternative expressions of satisfaction.

#### **Qualitative Approach to Understanding Volunteer Firefighter Satisfaction and Retention**

The evaluation of satisfaction represents a continuation of the previously discussed interviews and concept mapping exercises. Those with greater than two years of service constructed a continuing service concept map. Once the expectation map was fully constructed with the varying concept cards, I directed respondents to indicate their level of satisfaction with each expectation card. I recorded satisfaction levels with an intuitive scheme of colored dots that were to be placed upon the expectation cards. Green dots represented high satisfaction, yellow dots were moderate satisfaction, red dots represented low satisfaction, and the expectation index card had no dot if the respondent indicated no satisfaction whatsoever. Once I captured satisfaction

levels from the snowball respondents, the analysis occurred similarly to the examination of motives and expectations.

### *Individual Responses*

Snowball sample respondents chose a satisfaction level for each expectation at the conclusion of the expectation map construction. This allowed for a clear contrast between the respondent's expressed level of import for each factor and the resulting level of satisfaction. For example, a large index card with a red dot indicated a concept that is highly important as an expectation to continue service, but also one in which the respondent receives relatively low levels of satisfaction. This is the type of expectation that should be related to volunteers who are more likely to disengage or terminate their service. Conversely, a large index card with a green dot indicated a concept that is of high importance in terms of expectations and one in which the respondent returns high satisfaction for their investment of time. All things being equal, these types of considerations should be more likely to be associated with longer anticipated service period within the department. This is important to distinguish. A respondent that considers a concept highly important should also receive high satisfaction from that expectation in order to continue service. If the respondent does not receive a level of satisfaction that is commensurate with the level of import associated with each expectation, they may be likely to disengage from the service.

### *Values Satisfaction*

Values expectations (see above Table 5.1) included *helping others*<sup>9</sup>, *a sense of civic responsibility*, *paying back the community*, *teaching children about helping others (role model)*, and *helping others in the department (teaching)*. Among all snowball respondents, *helping others* produced the highest satisfaction of all the expectations to continue service. *A sense of civic responsibility* was also highly satisfying, but less frequent in responses when compared to helping others. Only three snowball respondents reported satisfaction from *paying back the community*,

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<sup>9</sup> Like chapters 4 and 5, individual responses in this chapter are italicized for easy identification.

although it was rated as highly satisfying. *Teaching children about helping others (role model)* yielded high levels of satisfaction for two snowball respondents. Finally, *helping others in the department (teaching)* was only satisfying to one snowball respondent and that was assessed a low level of satisfaction.

The perception of the values concept alters from the motives to join stage to the expectations to continue service stage. For example, a volunteer firefighter may join for what are arguably altruistic or value-laden reasons. They may see fire trucks responding to emergencies and think that they want to rush to the aid of others. That understanding, of course, is subject to modification with on the job service. A volunteer firefighter could for instance learn how to *help others* by performing fire suppression duties. In many departments however, fires are the least frequent emergency to which personnel respond. If a volunteer's department assumes the role of emergency medical services, these types of emergencies could represent two-thirds to three-quarters of the total call volume. A volunteer not fully trained in emergency medical services may find that they cannot effectively *help others* or meet their newly informed expectation. This scenario is more than likely given the overall decrease in fire related incidents and increase in medical related incidents among fire departments nationwide. The level of satisfaction that this volunteer possesses would thus be lower than for one trained in broader types of incidents. In this way, one's satisfaction with *helping others* (as well as the other values expectations) may differ amongst other volunteers. This could result in much different levels of satisfaction derived from each values response. Figure 6.1 illustrates the expectation/satisfaction concept maps for respondents eight and 51.

As Figure 6.1 demonstrates, respondent eight reported high satisfaction from *helping others*, which was the only values factor included in the concept map. *Being part of a valued public service* and *self-improvement*, which are both enhancement factors, were moderately satisfying but highly and moderately important respectively. This suggests that respondent eight seeks more satisfaction from these enhancement expectations. *Learning and applying new skills*, an

understanding expectation, was both highly important and highly satisfying. Finally, *family in the fire service*, a social expectation, was of low importance but highly satisfying for respondent eight. The *desire to promote* was also an enhancement expectation to continue service. Respondent eight was the only snowball sample participant that reported this concept. Respondent eight reported a *desire to promote* as moderately satisfying and of low satisfaction. The expectation/satisfaction concept map outlined in Figure 6.1 presents two opportunities for improvement. Both *being part of a valued public service* and a desire to promote have lower satisfaction levels than importance levels. Where these two expectations to continue service relate or intersect is that respondent eight likely wants a promotion to a leadership position within the department. This would make respondent eight a more important part of the valued public service in which they serve. Despite this opportunity for improvement, the most important expectation for continued service is *helping others*, a values expectation. In this factor, respondent eight is receiving a high level of satisfaction. This suggests that the department in which respondent eight serves is providing an adequate level of satisfaction to respondent eight. By comparison, respondent 51's expectation/satisfaction concept map suggests that there is room for improvement among values factors.

Respondent 51 reports high importance for *fellowship/brotherhood*, a social factor; as well as *helping others* and *civic responsibility*, which are both values factors. *Excitement*, an enhancement factor; and learning new skills, an understanding factor, were both moderately important and highly satisfying to respondent 51. Unlike respondent eight that reported high satisfaction for a single highly important values factor, respondent 51 reports moderate satisfaction for two highly important values expectations. From a broad view, it appears that respondent 51 receives adequate satisfaction from the social factors considered highly important and more than adequate satisfaction from the enhancement and understanding factors considered moderately important. Despite this, the lower satisfaction associated with the highly important values factors suggests that respondent 51 is not satisfied to a sufficient level. By comparison,



respondent eight appears to be receiving satisfaction that is conducive to continued service; however, respondent 51 is not. *Helping others* and *civic responsibility*, both values factors, are more important than they are satisfying for respondent 51. Without improving the conditions for respondent 51 and providing more opportunities for helping others and responsibility, respondent 51 may terminate their voluntary service.

#### *Enhancement Satisfaction*

Enhancement factors were also highly important as expectations to continue service, according to the expectation research. Enhancement factors included *excitement*, *self-improvement*, *being part of a valued public service*, *pride*, *helping respondent to mature faster*, *expectation for promotion*, *being part of a growing organization*, and a *feeling of accomplishment*. Overall, snowball respondents reported satisfaction from *excitement* over all other enhancement responses, with the large majority reporting high and moderate satisfaction. *Being part of a valued public service* produced high satisfaction among the snowball sample followed closely by *self-improvement*, which was also moderately to highly satisfying. *Expectation for promotion* and *pride* were highly satisfying for only two respondents respectively. *Helping me mature faster*, *being part of a growing organization* and a *feeling of accomplishment* were highly important, but only reported by one respondent respectively. Figure 6.2 provides a graphical comparison of expectation importance and eventual satisfaction for respondents 24 and 11.

As Figure 6.2 illustrates, there are a number of highly satisfying factors including *helping others*, a values factor; *excitement*, an enhancement factor; *learning new skills*, an understanding factor; and *family in service*, a social factor. For respondent 24, the *desire to improve self*, an enhancement factor, is moderately satisfying and moderately important. *Helping others in the fire department*, a values factor is moderately important and produced low satisfaction. *Being part of a valued public service*, an enhancement factor; and *community familiarization*, a miscellaneous factor; are both of low importance and of low satisfaction. When considering the enhancement factors, *excitement*, *desire to improve self*, and *being part of a valued public service*

had equivalent levels of satisfaction and importance. Although respondent 24 reported low importance for *being part of a valued public service*, the level of satisfaction was also low. Likewise, the desire for *self-improvement* is both moderately important and moderately satisfying according to respondent 24. *Excitement* was both highly important and highly satisfying. These corresponding levels of satisfaction with their importance counterparts suggest that respondent 24 is satisfied at a level that encourages continued service.

By comparison, respondent 11 does not appear to be receiving a sufficient level of satisfaction from their enhancement expectations to continue service. *Helping others*, a values factor; and *learning and applying new skills*, an understanding factor both are highly important and highly satisfying. *Being part of a valued public service* and *excitement* are both moderately important enhancement expectations for respondent 11. While *being part of a valued public service* is moderately satisfying, *excitement* produces low levels of satisfaction for respondent 11.

Therefore, respondent 11 desires a higher level of excitement and risk exposure than is found in his department. It suggests that respondent 11 may be dissatisfied and is more likely to disengage from service than respondent 24.

#### *Understanding Satisfaction*

Understanding expectations consisted of two responses, *acquiring/applying new skills* and *obtaining training*. Overall, the satisfaction from understanding expectations was high among snowball respondents. The majority of the snowball sample reported *acquiring/applying new skills* as highly satisfying. All three respondents that reported *obtaining training* as an important expectation to continue service reported high satisfaction also. This is appropriate.

Understanding motives to join were less important than their expectation to continue serving counterparts. Again, if fire service leaders ignore providing opportunities to volunteer firefighters because of the overall low importance as a motive to join, retention of volunteer firefighters will be difficult. Consider the expectation/satisfaction maps of respondents 30 and 18 (Figure 6.3).

Figure 6.3 shows that respondent 30 reports high satisfaction from four highly important

expectations. They are *pride*, an enhancement factor; *training*, an understanding factor; *helping fellow members of the community*, a values factor; and *fellowship/brotherhood*, a social factor. The remaining expectations to continue service for respondent 30 are of low importance. *Excitement*, an enhancement factor; *money*, a career factor; and *feeling more privileged than others*, a protective factor are all moderately satisfying. *Obtaining full-time employment*, a career factor, produces low satisfaction for respondent 30. Again, the key to understanding respondent 30's likelihood of continuing service is to examine the highly important expectations and their corresponding satisfaction levels. The understanding factor *training* is included in these highly important expectations to continue service. Because it, like the other highly important expectations, provide high satisfaction to respondent 30, continued service is likely.

This is unlike respondent 18, which is not receiving satisfaction at an appropriate level as far as understanding factors are concerned. *Friends and family*, a social factor, which was highly important as a motive to join, became moderately important as an expectation to continue service with moderate satisfaction. Like respondent 20, *excitement* also drifted from a highly important motive to an expectation of low importance and provided moderate satisfaction. *Helping others*, a values factor, increased in importance from motive to expectation and provided high satisfaction. *Civic responsibility*, another values factor, emerged as a highly important expectation that provided high satisfaction. *Being part of a valued public service*, an enhancement factor, was of low importance as a motive to join, and increased to moderate importance as an expectation to continue service and provided high levels of satisfaction. *Learning and applying new skills*, the sole understanding factor in the concept maps, was highly important as both a motive to join and an expectation to continue service. The level of satisfaction accompanying this understanding factor was only moderate. This suggests that respondent 18 considers understanding expectations highly important and is not receiving adequate satisfaction concerning learning and applying new skills. Although the two values responses, *civic responsibility* and *helping others*, are highly important and highly satisfying, it is

possible that respondent will disengage from service due to receiving an insufficient level of satisfaction associated with understanding expectations.

### *Social Satisfaction*

Social factors included *friends/family in service*, *fellowship/brotherhood*, *sense of belonging*, *family tradition of volunteering outside of the fire service*, and a *sense of community involvement*.

Overall, snowball respondents reported moderate to high satisfaction from social factors; although at least some respondents reported lower satisfaction. *Friends/family in service* was highly satisfying for just over half of the snowball sample. A few more respondents reported moderate satisfaction from *friends/family in service*, but still a few more reported low or no satisfaction from this same response. *Fellowship/brotherhood* was moderately to highly important among several snowball respondents. A *sense of belonging* produced moderate to high satisfaction among two respondents and only one respondent respectively found satisfaction from a *family tradition of volunteering outside of the fire service* or a *sense of community involvement*. Although a slight majority of the snowball sample reported high satisfaction from social responses such as *friends/family in service*, the lower satisfaction or, more importantly, the absence of satisfaction from *friends/family in service* requires a closer examination. Figure 6.4 provides a graphical comparison of concept maps from respondents considering social factors as important to continuing service.

Respondent 21a's expectation/satisfaction concept map is very simplistic. *Friends and family in service*, a social factor; and *helping others*, a values factor; are highly important and highly satisfying. *Excitement*, an enhancement factor, is moderately important and moderately satisfying. Although social factors were not highly important and highly satisfying among the majority of respondents, respondent 21a considers it such. The high level of satisfaction associated with the social factor suggests that respondent 21a is satisfied and will likely continue to serve.

Respondent 10's concept map is a bit more complex. *Being part of a valued public service*, an enhancement factor; *learning and applying new skills*, an understanding factor; and *a desire for self-improvement*, an enhancement factor, are all highly important and highly satisfying to respondent 10. *Excitement*, an enhancement factor, is highly important but only moderately satisfying. *Friends*, the only social factor present in respondent 10's concept map, are moderately important but yields only low satisfaction for respondent 10 and this could be a reflection of the insular networks of volunteer departments. Finally, *seeking full-time employment*, a career factor, is of low importance and produces no satisfaction for respondent 10. Aside from the obvious deficiency among the enhancement factor, *excitement*, which is highly important for continued service but only moderately satisfying for respondent 10, the social factor is also deficient. Respondent 10 considers *friends* moderately important and reports low levels of satisfaction from this social expectation. The insufficient levels of satisfaction between this enhancement and social factor suggest that respondent 10 may be dissatisfied to the point of disengagement.

#### *Protective Satisfaction*

Protective expectations included the response of *having resources that others do not*. Only one respondent reported a protective expectation as highly important to continuing service. Figure 6.5 illustrates respondent six's expectation/satisfaction concept map.

Respondent six reported six highly important expectations to continue service. *Having resources others may not*, a protective expectation was the only one of these highly important expectations to continue service that yielded moderate satisfaction. Figure 6.5 illustrates that respondent six is receiving satisfaction that is commensurate with the level of importance among every expectation save one. The protective expectation, *having resources others may not*, is not as satisfying as it is important for respondent six. Perhaps this single expectation, although unimportant overall to the snowball sample, is the deficiency that would cause respondent six to disengage from service.

### *Career Satisfaction*

Satisfaction derived from career expectations was generally low among the snowball respondents. Career factors included *seeking full-time employment* as a motive to join. As an expectation to continue service, *money* emerged with low importance in a few snowball respondents' concept maps. Three respondents reported low importance and one reported moderate importance associated with *money*. Recall that respondent 29 was the only snowball respondent to report high importance associated with seeking full-time employment. Respondent 29 had less than two years of service and consequently did not complete an expectation concept map. Instead, respondent 17's expectation/satisfaction concept map can demonstrate one of the respondents that reported multiple career expectations as important to continued service.

The career factors that respondent 17 reports as having any importance are *obtaining full-time employment* and *money*. While obtaining full-time employment is of low importance, it is highly satisfying to respondent 17. This is likely because respondent 17 possesses full-time employment in the fire service outside of their volunteer membership. *Money* is of low importance to respondent 17 but yields no satisfaction. This would normally suggest an opportunity for improvement and a condition whereby respondent 17 is more likely to disengage from service. However, recall that the large majority of snowball respondents reported gratitude for financial incentives but stated that it had nothing to do with why they serve. While obtaining full-time employment may be satisfying for a small segment of volunteers with access to full-time fire service occupations, money is likely unimportant and unsatisfying as an expectation to continue service. Again, the overall satisfaction from career factors cannot be determined from this small, non-probability sample. The quantitative results discussed later in this chapter will utilize the random, representative sample to clarify this.

### *Miscellaneous Satisfaction*

Only two miscellaneous expectations produced high levels of satisfaction. Respondent six reported high satisfaction from the highly important expectation associated with the *Sofa Super*

*Store Fire*, during which nine Charleston firefighters lost their lives in the line of duty. This was the only respondent that reported importance or satisfaction associated with this expectation to continue service. Respondent 21 reported high satisfaction from *fascination with the fire service*. No other respondents reported importance or satisfaction associated with this expectation.

### **Qualitative Categories of Joiners**

Using the pre-established categories of joiners, I identified satisfaction levels from the example snowball sample respondents' expectation maps. Although examining satisfaction levels overall provides some perspective to the expectations that provide satisfaction to volunteer firefighters, I utilized the categories of joiners to identify how the satisfaction varies among the different types of volunteer firefighters.

#### *Family Firefighter*

The importance of *friends and family in service* decreased significantly in importance among family firefighters. Respondent 43 was not the only snowball respondent to report high importance for *family in the fire service* as a motive to join, but when considering the pairs of factors associated with family firefighters (social and values), respondent 43 was clearly the best example among the snowball sample. Figure 6.7 illustrates the expectation/satisfaction comparison for these pairs of factors for family firefighters.

Respondent 43 reported high satisfaction from *friends/family in service, helping others, teaching children about the importance of volunteering, and excitement*. These expectations represent a social factor, two values factors, and an enhancement factor respectively. Unlike the overall expectation importance results, respondent 43 considers the social and values factors highly important and the enhancement factor only moderately important. This distinguishes respondent 43 as a family firefighter. While the satisfaction scores are all high, the emphasis on social factors could be problematic. First, the high importance and satisfaction on *friends/family in service* makes respondent 43's service somewhat reliant on the presence of *friends/family in service*. Should respondent 43's friends/family disengage from service, it is more likely that

family firefighters, such as respondent 43, will also disengage from service because they will no longer be satisfied with this highly important expectation. The second and broader problem is the aforementioned insular social network created by family firefighters. If the fire service is limited to recruiting future firefighters from the families of its current members, the numbers of firefighters will continue to decline. Fire service leaders have to recruit outside of these insular social networks to access higher numbers of future volunteers.

### *Altruists*

Altruists found values and enhancement factors as motives to join and expectations to continue service highly important. The satisfaction analysis identified respondent 45 as an example of an altruist. Figure 6.8 illustrates the expectation/satisfaction map for this respondent.

Respondent 45 reported high satisfaction from *helping others, family tradition of volunteering in a non-fire department opportunity, fellowship, and excitement*. These expectations represent a values factor, two social factors, and an enhancement factor respectively. The concept map reveals that there is a social influence on respondent 45's service. However, it is the position of the highly satisfied values factor in the concept map that reveals that respondent 45 is an altruist. *Helping others* is the working hub to which all of the other expectations are attached. Despite the additional expectations and social influences, the presence and placement of *helping others* defines respondent 45 as an altruist.

### *Excitement/Risk Junkies*

Like altruists, both values and enhancement factors motivate excitement/risk junkies.

Nevertheless, there are a number of differences between altruists and excitement/risk junkies.

First, altruists consider values factors of primary importance, followed by enhancement factors.

Excitement/risk junkies are the opposite of this, considering enhancement factors as their primary motivation. Next, altruists are much less likely to experience the motive to expectation drift that is present throughout this research. Altruists consider values factors important as motives to join and as expectations to continue service. Excitement/risk junkies, on the other hand, experience



motive to expectation importance drift. Chapter 5 revealed that respondent 21, an excitement/risk junkie, placed high importance on *excitement*, an enhancement factor, as a motive to join. After 36 years however, respondent 21 considered the same enhancement factor of low importance. Respondent 24 is the only snowball respondent to report high importance and high satisfaction from the expectation excitement. Figure 6.9 illustrates the expectation/satisfaction concept map for respondent 24.

Respondent 24's expectation/satisfaction concept map reveals that *helping others*, a values factor; excitement, an enhancement factor; learning new skills, an understanding factor; and family in service, a social factor. Although all of these expectations are highly satisfying expectations, only the values and enhancement expectations are highly important. This is the key to classifying respondent 24 as an excitement/risk junkie. It is essential to note that respondent 24 is the only snowball respondent to report high importance for *excitement*. This suggests that excitement/risk junkies may rely more heavily on *excitement* at the recruitment stage than they do during the service stage. This analysis suggests that offering exciting/risky opportunities to excitement/risk junkies may be useful during recruitment, but may not be sufficient to retain them.

### *Learners*

The motive analysis revealed that learners were primarily concerned with understanding motives to join. Enhancement motives to join were a secondary consideration at the recruitment stage.

Like most categories of joiners, the example of learner selected from the snowball sample experienced drift in the importance of motive to join and expectation to continue service. Figure 6.10 outlines the expectation/satisfaction concept map for respondent 10.

For respondent 10, the expectation/satisfaction concept map suggests that they derive satisfaction from a multitude of factors. The most important expectations were *being part of a valued public service, learning and applying new skills, desire for self-improvement, and excitement*. All of these were highly satisfying for this category of joiner, except *excitement*, which was moderately satisfying. The position of learning and applying new skills is the key to classifying respondent

10 as a learner. Learning and applying new skills falls between part of valued public service and desire to improve self. This demonstrates how the understanding factor can connect the values and enhancement factor. It is a prime example of how public service and self-improvement, or altruism and self-interest, are related and convergent. For learners, understanding factors are the key to public service and self-actualization. This explains why understanding factors are most important and satisfying for this category of joiner. With increased knowledge, skills, and abilities, a learner can better help others and better themselves.

### **Aggregated Expectation/Satisfaction Concept Maps**

Aggregating maps brings out the value of the concept mapping exercise and provides a substantive view of what volunteer departments are doing well at and what they need to improve upon. Like the motive and expectation analysis, I examined individual responses first to determine the overall sources of satisfaction according to the open-ended responses. Like the qualitative motive and expectation analyses, examining the average response alone might mistakenly suggest an expectation is highly satisfying. The aggregate map construction avoided this by considering the number of respondents for each expectation and satisfaction level reported. As previously stated, the aggregate maps provide the benefit of seeing the relationships between the responses as well. Figure 6.11 provides a graphical expectation/satisfaction comparison.

Among the individual responses, *helping others* remains the expectation for continued service with the highest importance providing the highest satisfaction. This is the expectation that acts as the anchor for other expectations. *Sense of civic responsibility* is not quite as important but is still rated highly satisfying. *Obtaining training/acquiring skills* was the third and final expectation rated as highly satisfying, although it too was of moderate importance. *Friends/family in service* and *excitement* are both moderately satisfying, while *self-improvement*, *seeking full-time employment* and *money* produce low levels of satisfaction.

The individual expectation/satisfaction concept map illustrates that overall, the importance and satisfaction is attributed to the helping others and bearing the responsibility to help others. The volunteer firefighter that no longer feels as if they are helping others because career/paid personnel are handling calls or emergencies involve tasks for which the volunteer has no training (i.e., medical calls and pre-hospital medical care) is likely going to experience lowered levels of satisfaction for expectations to continue service that are very important. As a result, the volunteer will likely choose not to continue their service. Given the low level of satisfaction from *self-improvement*, at least some snowball respondents were interested in *obtaining training/skills* in order to better serve their communities and help others, but found themselves unable to do so. While this was not a large number, it does suggest a connection between enhancement and values is important within the volunteer service. It also suggests that training really is an opportunity to entrench volunteers and make connections to the cornerstone values expectation of volunteers. The position of concepts within the aggregated individual response map demonstrates that *obtaining training and skills*, while tied to *self-improvement* and the possibility of *obtaining full-time employment*, is primarily concerned with the ability to help others. Again, this is from an overall perspective of the snowball sample.

The qualitative category of joiner analysis previously determined that among learners, there is greater satisfaction for self-improvement. It is difficult to construct a single perceptual map for all respondents; however, Figure 6.11 represents the majority of the snowball respondents based upon concept satisfaction level and frequency of response. If the categories of joiners were placed into this map, altruists would appear at the top and right side of the map, while learners and excitement/risk junkies would be placed at the bottom and left side of the map, where the factors generally appear less effective for retention. This suggests that the altruists and family firefighters are the cornerstone recruits for the volunteer fire service, which can be readily witnessed in most departments. The counter effect of that reality, however, is that the recruits

necessary to meet future demand are going to have to increasingly come from the left-hand / lower left hand corner of the plot.

It is possible that the single highly satisfying expectation on the left side of the concept map, obtaining training/acquiring skills, can effectively be used to break out of the insular network and increase the numbers of volunteer firefighters. Nonetheless, the numbers of all categories of volunteer firefighters, including the altruists and family firefighters, have to be buttressed to begin reversing the decline. That means departments must continue to meet the expectations and values focus of its insular social recruiting network and also breakout of that network with appeals to new prospective recruits through appeals related to enhancement and understanding. The ties that bind these different groups are really the use of skills to help others. That, then, should be the primary focus as the gateway appeal to each different category of joiner.

Next, I examined the satisfaction scores of the aggregated responses coded to Clary et al. (1998). This aggregated concept map took all of the individual responses, coded them to their respective Clary, et al. (1998) factor, and then illustrated their relationships and relative satisfaction levels (see Figure 6.12).

Figure 6.12 illustrates that when coded, values and understanding expectations, which are highly important and moderately important respectively, are both highly satisfying. Values factors represent the anchor and staying power of *helping others* and the emergence of *civic responsibility* as both highly satisfying. Understanding factors, as previously described, are highly satisfying in two ways. They improve the ways by which a volunteer can help others and also act to improve volunteers themselves. Enhancement and social expectations are both highly important but ultimately only moderately satisfying, suggesting that departments have opportunities to do better in this particular area. Within enhancement factors, *excitement* experienced a decline in importance and relatively lower levels of satisfaction. *Self-improvement* and *being part of a valued public service* emerged to produce relatively higher satisfaction. Again, this tends to emphasize the connection between self-actualization and skill generation and

the ability to help others at the same time. Social expectations such as *family and friends in service* declined in importance and satisfaction while *fellowship/brotherhood* produced relatively higher satisfaction. Finally, career and protective expectations are both of low importance and low satisfaction, with protective factors slightly higher in satisfaction.

It is not a concern that understanding expectations are more satisfying than they are important. In fact, this is preferred. The biggest areas of concern in the map are found in enhancement and social expectations. Recall from Chapter 5 that *excitement* dropped off significantly as an expectation to continue serving from its importance as a motive to join. However, *self-improvement, feelings of accomplishment, and being part of a valued public service* all emerged to prop up enhancement expectations. Despite this, the moderate levels of satisfaction associated with enhancement expectations could be an area of improvement for fire departments. The same applies to social expectations. They, too, are highly important but only possess moderate levels of satisfaction. Chapter 5 described that *friends/family in service* decrease in importance while *fellowship/brotherhood* increase in importance. It is possible that departments can do more to meet these enhancement and social expectations and firm up commitment within their volunteer ranks.

Overall, the qualitative satisfaction results demonstrate that values expectations, such as *helping others* and *civic responsibility*, along with understanding expectations, such as *obtaining training* and *acquiring skills*, are the most satisfying elements. Enhancement and social factors are highly important but only provided respondents with moderate levels of satisfaction. Career and protective expectations are largely unimportant and correspondingly yield lower levels of satisfaction.

Improving levels of volunteer satisfaction through social expectations will be a difficult task, but the map provides some outlines of a strategy. The department can certainly offer more events (i.e., family days, Christmas parties), but the satisfaction from these events is subjective and may vary widely from one volunteer to another. And, the events can be seen as more a burden than

benefit if they conflict with busy family schedules. Instead, fire departments can focus on fostering the *fellowship/brotherhood* present among the existing social structure within the department. This helps to break through the insular networks of family firefighters and improves satisfaction from another, perhaps more important, social expectation.

Improving satisfaction from enhancement factors is also difficult but feasible. *Excitement* likely fades with service, but increasing the level of skills and training may improve satisfaction from *self-improvement*. This continued growth also better enables the volunteer to *help others* and makes them a significant part of their department's structured response to emergencies, improving the volunteer's satisfaction from *civic responsibility*. This makes understanding factors an important influence on both enhancement and values factors. While the qualitative analysis suggests that departments implementing these strategies may improve retention, the results may not be representative of the entire population. Therefore, we will turn to the quantitative results for more reliable conclusions.

### **Quantitative Approach to Understanding Firefighters' Satisfaction**

As outlined in Figure 3.5, random sample respondents selected satisfaction levels in the survey instrument for each factor at the same time they selected importance levels for the same factor as a motive to join and as an expectation to continue serving. The use of the survey instrument, the larger number of respondents, and sampling method provided much more reliable estimates regarding importance and satisfaction levels. The qualitative results served to inform the survey instrument, discover the wide breadth of factors involved acting as motives to join and expectations to continue serving, and establish the relative satisfaction for those expectations among the snowball sample. The quantitative analysis used the survey instrument responses from the random sample to measure satisfaction for the factors considered in the motive and expectation analysis.

### *Aggregate Expectation Satisfaction*

The quantitative satisfaction analysis was an extension of the quantitative expectation analysis described in Chapter 5. After respondents expressed the level of import for the factor as a motive to join and an expectation to continue service, the respondent was prompted on their contemporary satisfaction with the factor. This allowed for a more robust empirical analysis of volunteer satisfaction responses within a representative sample of respondents. Table 6.1 illustrates the individual quantitative satisfaction responses among the random sample. The results outline the individual responses from which random sample respondents derive the most satisfaction.

Like the snowball sample respondents, the random sample respondents also listed *helping others* and *civic responsibility* as the sources of the highest levels of satisfaction. These two values factors provided substantially higher satisfaction than did other responses. The *feeling of accomplishment*, an enhancement factor, is the third most satisfying and exists between the top two expectations and the last four highly satisfying expectations. The last four highly satisfying expectations were *being part of a valued public service*, *obtaining training*, *fellowship*, and *excitement*. *Being part of a valued public service* and *excitement* are enhancement factors, *obtaining training* is an understanding factor, and *fellowship* is a social factor. A mere 0.04 points separated the means of these four factors. Highly satisfying factors did not tend to pick up career or monetary factors, which tended to be marginalized versus these other response items. In general, most of these expectations produced at least moderate levels of satisfaction. These included *serving as a role model*, *acquiring skills*, *networking with community and business leaders*, *acquaintances*, *close friends/family members*, *payback to the community for success*, and *possessing sufficient resources to volunteer*. *Gaining employment* and *supplemental income*, both career factors, were the only two expectations providing relatively low levels of satisfaction. The mean for *gaining employment* was only 0.04 points below the lower threshold for moderate

importance. However, *supplemental income* was clearly the lowest in satisfaction of all individual responses.

Random sample respondents reported *servicing as a role model* as an expectation with moderate importance. This was significantly lower than the other two values expectations, which produced the highest satisfaction of all responses. It is evident that values factors are the most satisfying, but *servicing as a role model* is much less satisfying. *Helping others* and *civic responsibility* are the values responses that provide the highest satisfaction.

The three enhancement responses evaluated were each assessed as highly satisfying, but were slightly less robust in terms of satisfaction than the two values responses, which produced the highest satisfaction of all responses. *Excitement*, which was only moderately satisfying according to the qualitative results, possessed high satisfaction according to the quantitative results.

Although *excitement* is highly satisfying to random sample respondents, it is the lowest of the enhancement responses. *A feeling of accomplishment* and *being a member of a valued public service* were enhancement expectations with higher satisfaction.

*Obtaining training* was a more robust understanding expectation than *acquiring skills*, which was moderately satisfying. The qualitative results suggested that *obtaining training* relates to improving the organization, while *acquiring skills* related more to respondent improvement.

With the values factors possessing the highest satisfaction, it is logical that *obtaining training*, which supports these values factors, produces more satisfaction than *acquiring skills*. *Acquiring skills* support enhancement factors, which possess a lower overall satisfaction level.

While comparing satisfaction between individual responses is informative, comparing the satisfaction response to the importance response, as was completed in the qualitative analysis, helps to understand if satisfaction levels are adequate. Table 6.2 illustrates the expectation importance and satisfaction level for each individual response among the random sample.

Table 6.2 shows that with the exception of *close friend/family member*, *gaining employment*, and *supplemental income*, all of the expectation importance scores were slightly higher than the



satisfaction scores. This suggests that random sample respondents consider most individual responses slightly more important than the associated satisfaction level. The minimal variance between expectation importance and satisfaction are small. Two of the three responses with greater satisfaction than importance were *supplemental income* and *gaining employment*, both career expectations, which indicates that respondents were more satisfied than they anticipated they would be with these factors. The final response reported with a higher satisfaction response was *friends/family in service*, a social expectation. This underscores the family firefighter role in the volunteer fire service. The remaining responses reported higher satisfaction than importance. On whole, then, departments appear to be doing reasonably well in meeting the expectations of most volunteers. Deviations from expectations are small, and in a few cases where expectations are small to begin with, respondents' satisfaction slightly exceeds expectations. This suggests that the volunteer ranks in South Carolina are reasonably sound at the moment.

The largest variance is *supplemental income* where the importance value was 1.81 and the satisfaction value was 1.92. This represented a 0.11-point variance between the importance and satisfaction, meaning that *supplemental income* was more satisfying than it was important. This matches the interview responses from snowball sample respondents who stated that *supplemental income* was appreciated but not necessary. Despite the variance, *supplemental income* was one of only two responses with low importance and low satisfaction. *Gaining employment*, another career factor and the only other response with low importance and low satisfaction, also possessed a slightly higher reported satisfaction level than importance according to the random sample.

The third and final response with a higher satisfaction level than importance is *close friend/family member*. Recall that the snowball respondents reported that *friends/family in service* was the motive to join with the highest level of importance. These quantitative results demonstrate that *friends/family in service* possesses a moderate level of importance as an expectation to serve and satisfaction is relatively higher than assessed import. Comparatively, however, *friends/family*

remain in the lower end of expectation importance and satisfaction. This helps to confirm the concept of motive to expectation importance drift. Imagine if all fire departments focused solely on friends and family during their recruitment and retention efforts. While it may have importance for some volunteers during recruitment as discovered in the quantitative category of joiner analysis, the results here suggest that there are many other more important and more satisfying factors to consider during retention efforts. On whole, departments do appear to be good at maintaining these networks of social ties. However, that insularity can, of course, be a mixed blessing. It may mean that departments are good at maintaining existing networks but struggle when reaching outside of them. That is problematic in light of future needs of these volunteer departments.

The next step in this analysis was to code the individual responses according to the Clary et al. (1998) framework. Once coded, I calculated the mean averages of the satisfaction levels from the random sample respondents. This considered the satisfaction of individual responses as described previously as an aggregated Clary, et. al (1992) factor. Table 6.3 outlines the satisfaction responses coded to the Clary, et al. (1998) factors according to the random sample.

As Table 6.3 reveals, satisfaction from values factors produced the highest levels of satisfaction, with satisfaction from enhancement factors following and also rated highly satisfying.

Understanding factors were moderately satisfying along with social and protective factors. The sole factor that possessed low satisfaction was career goals. The random sample differed from the snowball sample in several areas. While values expectations provided the highest level of satisfaction and career the lowest, the other factors fell in between. In the qualitative results, understanding expectations were thought more satisfying, but in the survey results, enhancement factors were seen as the second most important category. Where social and enhancement factors were moderately satisfying and protective expectations were of low satisfaction according to the snowball sample respondents, the random sample respondents reported that enhancement, social and protective expectations were all moderately satisfying. Quantitative results must be favored

over the qualitative results due to its larger sample, sampling methodology, and more representative response items. I then compared the quantitative expectation importance and satisfaction averages coded to the Clary et al. (1998) factors (see Table 6.4).

Table 6.4 illustrates that the deviations between importance and satisfaction are small among the Clary, et al. (1998) aggregates. The variations between importance and satisfaction were minimal throughout. Again, volunteer departments in South Carolina appear to be meeting expectations of volunteers.

All of the expectation items within 0.10 point of their corresponding satisfaction scores. Like the individual responses, the coded factors' expectation importance slightly exceeded their satisfaction for every factor except career and social factors. The means of expectation importance and satisfaction level for social factors were within one-thousandth of a point and when rounded to one-hundredth of a point represented the narrowest variance. This means the random sample is revealing a virtually equivalent level of satisfaction based on the importance of social factors. Career expectations had a lower importance than reported satisfaction. Recall that several qualitative respondents reported that they were happy that they received money for their service in the form of stipends or pay-per-call. Nevertheless, all of those qualitative respondents stated that money is not why they volunteer. For the snowball respondents, *money* is not important but it is satisfying and exceeded their expectations. Figure 6.13 also provides a graphical comparison of the expectation importance and satisfaction levels among the random sample respondents previously described.

Figure 6.13 illustrates that the satisfaction derived from the Clary, et al. (1998) factors follow the expectation importance. The expectation and satisfaction intervals overlap, indicating that volunteers' expectations are being met. Values, enhancement, and understanding expectations are in the top tier of importance and satisfaction. The secondary tier of importance and satisfaction is comprised of social and protective expectations. Finally, career expectations, which possess the lowest importance and satisfaction, are the sole factors in the tertiary tier.

Next, this research turned to exploring alternative explanations. Like the motive and expectation analyses, the satisfaction analysis used the various institutional and demographic control variables to separate the random sample respondents into subsets. This allowed me to measure the effects of these institutional and demographic variables in order to evaluate any effect they have on satisfaction. Again, I performed a difference of means test to identify any of the Clary, et al. (1998) factors with mean satisfaction scores that were statistically different between the control variables.

#### *Institutional Differences*

First, I applied this analysis to institutional control variables (see Table 6.5). The institutional control variables considered were the same as used in the motive and expectation analyses and like them, the satisfaction analyses searched for a statistically significant difference of means. The institutional control variables included department type/organizational structure and type of population served. Department type/organizational structure consisted of wholly volunteer and mostly volunteer departments. Departments that utilized primarily or solely paid personnel were not included in this research. Due to the small sample size of respondents serving suburban and urban areas, these two control variables were again combined and compared collectively to respondents serving rural areas. Population type served were either urban/suburban and rural. This was based on the survey response from random sample participants.

As Table 6.5 outlines, the satisfaction results separated by department type/organizational structure followed that of the motive and expectation analyses. None of the six Clary, et al. (1998) factors possess statistically significant differences of means between respondents from mostly volunteer departments and those from wholly volunteer departments. However, the order of factors in the secondary tier of satisfaction is different between the subsets. While respondents in wholly volunteer departments consider social factors more satisfying than protective factors, members of mostly volunteer departments report higher satisfaction from protective factors than social factors. This variation is minimal as both groups report social and protective factors in

their secondary tier of satisfaction. When satisfaction is examined among the representative sample, there is little difference between those from wholly volunteer departments and those from mostly volunteer departments. This suggests that department type/organizational structure has little effect on the satisfaction derived from the Clary, et al. (1998) factors.

Table 6.5 revealed that the reported mean satisfaction levels of values and career factors vary with statistical significance between population type served. Respondents serving suburban and urban populations reported higher satisfaction from both values and career factors. This suggests that the type of population served has somewhat of an effect on respondents. Given that values factors have the highest importance and yield the highest satisfaction, even this small variance between respondents serving rural populations and those serving suburban/urban populations is important. Although career factors are considered of the lowest importance and yield the lowest satisfaction, it is also important to recognize that respondents serving suburban/urban areas obtain a higher level of satisfaction from career factors. Volunteers serving suburban/urban areas may be obtaining full-time employment, which is causing an increase in career satisfaction among this subset, which is much smaller than the subset containing respondents serving rural areas. If career related factors, such as seeking *full-time employment*, *supplemental income*, and *networking with community and business leaders* are legitimately available to volunteers, like in departments serving suburban and urban populations, they represent a path to higher satisfaction among a small portion of respondents. Figure 6.14 provides a graphical comparison of the satisfaction derived from the Clary, et al. (1998) factors for the respondents in the department type/organizational structure subset.

Figure 6.14 reveals that respondents serving rural populations derive satisfaction from factors in tiers that are similar to the overall satisfaction results. Values, enhancement, and understanding expectations are in the primary tier of importance. The secondary tier consists of social and protective satisfaction. The tertiary tier of satisfaction is composed of career factors. Like the department type results, this analysis reveals that respondents serving rural areas consider social

factors more satisfying than protective factors, while respondents serving suburban/urban areas consider protective factors more satisfying than social factors, although both factors are within the secondary tier of satisfaction in both subsets. However, Figure 6.14 illustrates the greater satisfaction derived from career factors by respondents serving suburban/urban populations. In rural areas, where full-time employment in the fire service is unavailable, it is understandable that these volunteers would have lower satisfaction.

### *Demographic Differences*

Examining the demographic differences between respondents was also part of the search for alternative explanations. Demographic differences included the following variables: age, gender/race, marital status, parental status, years of service, family history of firefighting, continuous versus intermittent service, and full-time service in the fire service. Like the motive and expectation analysis, I used the control variables to analyze what effect the different levels of each had on satisfaction as coded by the aggregated Clary et al. (1998) factors. Again, I looked for statistically significant difference of means between each demographic subset. Table 6.6 outlines the mean averages of the Clary, et al. (1998) factors separated by demographic control variable.

As Table 6.6 illustrates, satisfaction scores for values factors had statistically significant differences of means among marital status, years of service, and full-time employment in the fire service. Understanding factors also had statistically significant differences of means among the same control variables. Career factors possessed the highest number of statistically differences of means. Across all control variables, only a family history of firefighting and continuous versus intermittent service did not yield statistically significant differences of means. For social factors, marital status and family history of firefighting were significantly different. Protective factors were significantly different among age, marital status, years of service and full-time employment in the fire service. Finally, race/gender, marital status, parental status, and full-time employment in the fire service possessed statistically significant differences of means.

I began by examining age of respondents. Like the motive and expectation analysis, I broke the respondents into two subsets separated by median age (43 years). Table 6.6 demonstrates that the top tier of satisfaction is not different between these subsets. Satisfaction derived from values, enhancement, and understanding expectations, like the overall results, exists in a primary tier of importance for both age groups. Satisfaction from social expectations is also similar between the subsets and is in a tertiary tier of satisfaction. Younger volunteers report much higher satisfaction from protective and career expectations than older volunteers do. Despite both of these expectations providing the lowest satisfaction overall, these results suggest that protective and career expectations could provide more satisfaction to younger volunteers. Nevertheless, satisfaction from career and protective expectations are not the primary or secondary sources of satisfaction among older or younger volunteers.

Next, I examined race and gender. Recall that the representative sample was limited in both females and racial minorities. Therefore, they were once again combined in order to compare traditional volunteers (white males) against non-traditional volunteers (those that are not white males). Figure 6.15 provides an error bar chart of the comparison.

Similar to the expectation analysis, Figure 6.15 shows that non-traditional volunteers report higher satisfaction from career and enhancement factors. Although non-traditional respondents report higher satisfaction from the other four Clary, et al. (1998) factors, they were not statistically significant differences in mean values (see Table 6.6). Statistically significant differences of means were not found for values factors among this subset. Still, the values angle may be useful to departments as an opportunity for recruitment and retention of non-traditional volunteers. It appears that values, enhancement and understanding are in general more satisfying to non-traditional volunteers versus white males. In addition, career and enhancement satisfaction is statistically significant versus white males. By emphasizing values expectations such as *helping others*, *civic responsibility*, and *servicing as a role model for others*, the fire service may be able to tap into more diverse pools of recruits and retain them. Emphasis on skills and

understanding and potential career paths likewise seem like useful appeals to diversify and break down the insular nature of the current volunteer service

Next, I examined marital status. Like the expectation analysis, marital status represents the most influential control variable. All six Clary, et al. (1998) factors possessed statistically significant differences of means in this subset. Across all factors, unmarried respondents reported higher satisfaction than married respondents did. Although the unmarried portion of the representative sample is less than half of the married portion, Table 6.6 shows the much higher satisfaction derived by unmarried respondents. This suggests that the volunteer fire service is more satisfying to unmarried and likely younger respondents. It may become more of an obligation for more mature married volunteers who have other obligations to meet. In fact, understanding factors, previously discussed as a link between enhancement and values factors as well as a way to attract volunteers outside of the classic model, clearly emerge in the primary tier of satisfaction among unmarried respondents. Protective and social factors exist in the secondary tier of satisfaction. While career factors are in the unmarried respondent's tertiary tier of satisfaction, they report a much higher level of satisfaction from career factors than their married counterparts. In departments where career factors are available, they could be used to retain unmarried volunteers who consider career factors much more satisfying. All departments should consider the use of understanding factors to recruit unmarried respondents, as they report much higher satisfaction from these understanding factors.

This research examined satisfaction from respondents separated by parental status next. Table 6.6 revealed that career and enhancement factors were more satisfying for respondents without children. Table 6.6 illustrates the increase in satisfaction from enhancement factors is apparent among respondents without children, but is only slightly higher than respondents that are also parents. The increased satisfaction from career factors among respondents without children is even more pronounced in Table 6.6. Like marital status, volunteers without children are likely more mobile and less likely to have established careers. As a result, they are more likely to



derive greater levels of satisfaction from career factors. Despite this, career factors do provide the lowest level of satisfaction overall.

Next, I examined effects related to years of service. Again, the sample was broken into two segments, separated by nineteen years of service, the mean years of service. This compared respondents with less and more than nineteen years of service. Table 6.6 demonstrates that years of service is a highly influential control variable. Respondents with fewer years of service reported higher satisfaction for all of the factors with statistically significant different means. This suggests that as volunteers mature in service, they derive lower levels of satisfaction from these factors. In most departments, the rigor and demands of firefighting essentially make it a young man's game. This appears to be popping up above in the differences between unmarried and married respondents and here in terms of years of service. Interestingly, the actual test associated with age in Table 6.6 is not significant (except career and protective satisfaction). Thus, these differences in satisfaction may be more related to obligations and the physical well-being necessary to do the job.

Next, I examined family history of firefighting. Legacy firefighters, those with a family history of firefighting, are compared to non-legacy firefighters, those without a family history of firefighting. Table 6.6 outlined, the only statistically significant difference of means of satisfaction between this subset was for social factors. This is understandable as the social influences of the family history of firefighting would affect the satisfaction derived from social factors. Figure 6.16 illustrates the comparison of legacy versus non-legacy respondents. Figure 6.16 clearly illustrates the increased satisfaction from social factors that legacy firefighters derive. Aside from this difference, the satisfaction derived by both legacy and non-legacy firefighters is very similar across all other factors. This suggests that with the exception of its influence on social factors, a family history of firefighting is not a highly influential control variable. I did not analyze continuous versus intermittent service in this analysis, as it did not possess any statistically significant differences of means for satisfaction across all factors.

Finally, I examined full-time employment in the fire service. As Table 6.6 demonstrated, all of the factors except social factors possessed statistically significant differences of means. Respondents without full-time employment in the fire service reported higher satisfaction from values, understanding, protective, and enhancement factors. Respondents without full-time employment in the fire service reported higher from only career factors. This is intuitive as those who have found full-time employment in the fire service would possess higher satisfaction from career factors, such as *seeking full-time employment in the fire service* and *supplemental income*. Figure 6.17 illustrates the comparison of this subset. Figure 6.17 illustrates that all of the factors provide greater satisfaction to respondents that have no full-time employment in the fire service with the exception of career factors. This is interesting, as Figure 6.17 demonstrates that volunteer firefighters with other full-time employment in the fire service have a lower overall satisfaction across all factors, except career factors, which are of the lowest importance and satisfaction overall. Volunteer firefighters who have full-time employment in the fire service in another department represent an important supplement to the volunteer workforce. These individuals already have a high level of training due to the requirements of their full-time occupation. However, a paid firefighter that is also a volunteer firefighter clearly has a lower satisfaction from values, enhancement, and understanding factors, which make up the primary tier of importance and satisfaction as expectations to continue service. Furthermore, fire service leaders must note that volunteers without full-time employment elsewhere consider understanding expectations more satisfying than volunteers that are also employed by the fire service. Those employed by the fire service derive greater satisfaction from social factors than volunteers without full-time employment in the fire service. Those with full-time employment in the fire service likely consider volunteering more as a social club. This important difference makes full-time employment in the fire service significant within the motive/expectation calculi of individuals deciding to join/currently serving in the volunteer fire service.

## **Quantitative Categories of Joiners**

Like the qualitative satisfaction analysis, the overall lack of variance when comparing the quantitative expectation importance and satisfaction does not help to explain differences. As a result, I once again utilized the pre-established categories of joiners identified during the motive analysis in order to examine the levels of satisfaction for individuals. I was then able to compare expectation importance to eventual satisfaction in order to determine the likelihood of members in each category of joiner to continue serving. Figure 6.18 illustrates the comparison of eventual satisfaction between the four categories of joiners.

### *Family Firefighters*

I first examined family firefighters. Figure 6.18 shows that the social factors are not the expectations to continue service with the highest satisfaction. Nevertheless, social factors remain in the primary tier of satisfaction, along with values, enhancement, and understanding factors. Protective expectations yield a secondary level of satisfaction, followed by career factors in a clearly defined tertiary level of satisfaction.

### *Altruists*

Next, I examined the expectation satisfaction reported by altruists in the random sample. Figure 6.18 demonstrates that members of the altruist category of joiner have values, enhancement, and understanding factors in their primary tier of satisfaction. Protective and social expectations are in the secondary tier of importance among altruists. Like the overall results, altruists consider career factors the least satisfying and they exist in a clearly delineated tertiary tier of satisfaction.

### *Excitement/Risk Junkies*

Like altruists, Figure 6.18 illustrates that excitement/risk junkies consider values and enhancement expectations the most satisfying. Excitement/risk junkies, though, report understanding factors in a secondary tier of satisfaction. Protective and social expectations exist in a tertiary tier of satisfaction for excitement/risk junkies. Finally, career factors are in a

quaternary tier of satisfaction. This suggests that excitement/risk junkies are the only category of joiner with a primary tier of satisfaction containing only enhancement and values factors.

### *Learners*

Learners were a category of joiner that considered understanding factors as the most satisfying expectations. Figure 6.18 illustrates that learners derive their satisfaction from understanding, values, and enhancement expectations, which are in the primary tier of satisfaction.

Understanding and values satisfaction are slightly higher than enhancement satisfaction. This suggests that, for learners, the knowledge, skills, and abilities attained through understanding factors is more satisfying when helping others than it is in the realm of self-improvement.

Protective and social factors exist in a secondary tier of satisfaction, followed by satisfaction from career factors, which are in a tertiary tier of satisfaction.

Comparatively, these results approximate the results from the qualitative categories of joiners.

Family firefighters consider social factors much more satisfying than the other groups, but still rely on values and enhancement factors as part of their primary tier of satisfaction. The single highest satisfaction for family firefighters comes from values expectation to continue service.

Altruists consider values, enhancement, and understanding factors as the most satisfying expectations to continue service and likewise consider values factors the single most satisfying expectation to continue service. Excitement/risk junkies receive the most satisfaction from enhancement, values and understanding factors. For this category of joiner, enhancement factors provide the single highest satisfaction. Finally, learners consider understanding satisfaction as the factor in service with the single highest satisfaction. Nevertheless, learners also receive high levels of satisfaction from values and enhancement satisfaction.

### **The Effects of Satisfaction upon Volunteer Retention**

This research established that motives to join are what influence an individual to engage in the volunteer fire service. The previous chapter demonstrates that these motives are naïve and can change into fully informed expectations for continued service. In this chapter, I also examined

satisfaction, which is a product of having expectations met. I identified the various sources of satisfaction according to the type of volunteer firefighter considered. This research has demonstrated that satisfaction is a function of having expectations met and that fire departments in South Carolina can do a better job in meeting volunteer firefighters' expectations and providing them the resultant satisfaction. A volunteer firefighter who does not have their expectations to continue service fully met will be unsatisfied and eventually disengage from service. Along these lines, this research has not yet established the magnitude of the effects of meeting these expectations and providing satisfaction as a function of retention. By using the random sample respondents and regression analysis, one can begin to understand the factors' effects on retention.

I conducted weighted least squares regression on the dependent variable using the five models as outlined in Chapter 3. In the following models, the dependent variable is the combined service length measurement – one that combines response sets on the likelihood of retention for 1 and 5-year service periods as well as an open-ended question about the number of future years of service. The following parameter results connote the number of years of service remaining, as calculated in the dependent variable, based on the increase of one level of the independent variable. For example, consider values factors such as helping others, civic responsibility, or serving as a role model. A regression estimate of 2.0 for values satisfaction would suggest that an increase in one level of satisfaction associated with values factors, such as providing satisfaction to a respondent sufficient enough to move them from moderately satisfied to highly satisfied, will result in an increase of 2 years of service remaining. This will demonstrate the actual effects of the independent and control variables on the dependent variable.

The control variables related to years of service variables were interacted with the age ranges of respondents (median + / - standard deviation) to create four different categories of volunteer.

These four variables explicate the years of service that have been completed by 18-29, 30-43, 44-57, and 58-100 year olds.

*Disaggregated Components (Models One, Two, and Three: Dependent Variable ~ Clary, et al. (1998) six factors [as motives, expectations, satisfaction respectively] + Control Variables)*

Table 6.7 outlines the results of the first three regression models. The first model utilized the reported importance of the six Clary, et al. (1998) factors as motives to join along with the control variables regressed on the dependent variable. The second model utilizes the expressed level of importance for the factor as an expectation to continue service. The third and final model specification controls for the expressed level of satisfaction versus the six Clary, et al. (1998) factors.

Table 6.7 presents the parameter estimates of three model specifications with the results suggesting that the retention calculus is one of short memory. Simply stated, the decision to continue serving as a volunteer is not all that closely tied to initial motives to join nor even current expectations to serve. The models really work best when considering the current expression of satisfaction with the different Clary factors.

In terms of motives to join, none of the six factors reaches traditional significance levels and three of the factors exhibit negative (but not significant) relationships with the retention period dependent variable. The strongest parameter result clearly is related to values where the parameter is positive and significant at very relaxed  $p < .10$  (single tailed test). The magnitude would be substantial, however, as a one-increment increase in values as a motive to join would result in a 3 year increase in the anticipated service period. Volunteers who are most likely to continue serving had values oriented goals in mind when they decided to join the fire service. Of the remaining factors, only a couple shows some borderline strength – social engagement and career motives. The social motives parameter misses the relaxed  $p < .10$  level of significance (it would be significant at  $p < .13$  with a one tailed test). Here, the relationship is *negative*, suggesting that respondents that joined for social networking opportunities could exhibit shorter service periods. Career motives exhibit weak ( $p < .12$  one tail) evidence of a positive relationship

with service period. The remaining estimates are really indeterminate given that standard error terms are larger than the associated parameter estimate.

Moving forward to contemporary expectations to service the results tend to improve slightly.

Here the values expectation is positive and significant at  $p < .05$  (one tailed test). The parameter indicates that a one-increment increase in values expectations results in a 5-year increase in the service period. The conclusion is more solid in the contemporary responses of respondents.

Those volunteers with values expectations at the middle of their volunteer calculus tend to have longer service periods. The previous support for potential social and career factors evaporates in the second model specification. Now all standard error terms are larger than the associated parameters, so we cannot really draw any conclusions on the other five factors.

Finally, looking at expressed levels of satisfaction with these different factor categories appears to work best. That means it is not so much motives nor contemporary expectations that matter as it is simple satisfaction that can explain service periods. In the third model specification the values category is not significant at the traditional  $p < .05$  level with a two tailed test. The parameter result is reasonably stable and suggests a 5-year increase in service period on the basis of one unit increase in the satisfaction response set.

When using contemporary satisfaction levels, I also find some marginal influences for the role of enhancement and understanding categories. The enhancement parameter is positive and significant at  $p < .07$  with a one-tailed test. This means that response items like *feeling of accomplishment*, *valued public service*, and *excitement* may have weaker positive relationships with volunteer service periods. Understanding factors, on the other hand, show very weak support ( $p < .13$  one-tailed) for a negative relationship with one's service period.

Thus, in terms of the disaggregated results, it appears that current levels of satisfaction in often opaque areas such as values and enhancement offer the best explanation of longer volunteer fire service periods. The absence of significance among the Clary, et al. (1998) motives speaks to the naivety of volunteers' motives at the recruitment stage. Many of the snowball respondents stated

that they did not know what a job in the fire service entailed or the training required when they joined. These regression results confirm these statements. The lack of overall significance among the Clary, et al. (1998) expectations also suggests that the importance of expectations to continue service is also largely irrelevant to continued service. Once volunteers enter the service, the department guides and orients them as to what is important and what service entails.

Volunteer firefighters do not assign an express amount of importance to the Clary, et al. (1998) factors, but instead, they are interested in simple satisfaction with different factors. Of those factors, the values category is clearly the most essential to retention.

The issue, then, for fire service leaders is finding ways to induce satisfaction from values factors such as *helping others*, *civic responsibility*, and *serving as a role model*. *Civic responsibility* may be the easiest to provide in smaller, departments in rural areas. In these types of areas, either volunteers take the responsibility for providing fire services to the community or no one provides fire services to the community. The decline in the numbers of firefighters has exponentially become a detriment to this values factor. As volunteer staffing declines, or alternatively call volumes rise to levels that volunteers can no longer manage them, paid/career personnel become part of the department. They are initially placed to supplement volunteer personnel. Perhaps they initially work during daytime hours when the bulk of volunteers are at their full-time jobs outside of the fire service. At the point where a call occurs, that is completely handled without the use of volunteer personnel, *civic responsibility* changes. A volunteer that then asks who will provide fire services to the community if I do not, can answer that the paid/career personnel will. *Serving as a role model* is also subjective. Many volunteers show their children the worth of volunteering and serving their communities. For those that do not, fire service leaders should consider these highly satisfying values factors. Perhaps departments should place new recruits with established members allowing the seasoned personnel to *serve as a role model* for the inexperienced members. This enables current members without the means to *serve as a role model* for their family to draw satisfaction from this values expectation.



*Helping others* is likely the most difficult expectation to meet. Consider the average volunteer at the time they join the fire service. They may join because they want to *help others*, have been encouraged by their families to serve, or desire to improve themselves. Alternatively, they perhaps have witnessed the excitement of passing fire trucks responding to an emergency. They may feel a desire to be a part of rushing to the scene of an emergency to provide assistance to the needy. In any case, they are quickly oriented to *helping others* soon after joining and find that it involves much more than racing to the scene of the emergency. They soon realize that to *help others*, they must obtain a high level of training. This level of required training increases exponentially with each additional service provided to the community. The ability to *help others* is much different for new members of departments offering multiple services to the community and existing members of departments that add multiple services to the community. Interior structural firefighting alone requires hundreds of hours of training. Driving and operating fire apparatus requires additional training. Providing emergency medical care, which comprise between one-half and three-quarters of many departments call volumes, require hundreds to thousands of hours of additional training. Technical rescue and hazardous materials responses require hundreds of more hours of training. In departments where these training requirements exist for new members or change for existing members, *helping others* is much more difficult. For volunteers that lack the aptitude or physical capability to complete this required training, *helping others* may appear unattainable. Additionally, as existing members age, they become incapable of performing the same duties and can be further complicated by the addition of career/paid personnel. An aging volunteer may feel as if they can no longer participate in firefighting operations and instead, will drive and operate fire apparatus. Where career/paid personnel exist to drive and operate fire apparatus, this leaves the aging firefighter only administrative tasks to gain satisfaction from *helping others*. The level of satisfaction for *helping others* derived from balancing the department's checkbook is likely very different from the level of satisfaction derived from pulling an unconscious person from a burning building. Satisfaction

may decline among volunteers, but fire service leaders can compensate somewhat for this decline. Volunteers that are continually told by fire service leaders that what they do for the department *helps others* are more likely to be satisfied from this values factor than those that simply begin to feel as if they are no longer *helping others*. Fire service leaders must consider the power of *helping others*, along with the other values factors, in providing satisfaction to volunteer firefighters. It is essential that the fire service orient new and current volunteers to the importance of helping others. It is equally as important that fire service leaders continually and often remind volunteers that what they are doing, even if it is insufficient due to family or work commitments or the volunteer's inabilities, *helps others*. Such a focus may help engender levels of satisfaction to all volunteers from this highly influential factor.

While values factors are altruistic in nature, enhancement factors are concerned more with the individual. Volunteers consider enhancement factors as satisfying by way of achieving self-actualization. Enhancement factors include *excitement*, *being a member of a valued public service*, and *a feeling of accomplishment*. *Excitement* is understandably a satisfying expectation among many volunteers. Excitement, while useful during recruitment, is quickly de-emphasized during service. New firefighters are quickly told that they must suppress their excitement during operations and training. It is important that firefighters operate at emergencies using logical problem solving skills in lieu of emotions such as excitement. Therefore, fire service members often consider excitement taboo. *Being a member of a valued public service* is a simplistic expectation. It simply orients volunteers to the importance of the fire service and what a valued public service it is. *Being a member of that valued public service* provides satisfaction to volunteers, albeit at different levels. A feeling of accomplishment is also relative from one volunteer to the next. Fire service leaders can recognize volunteers and their accomplishments to better provide satisfaction among this expectation.

### Years of Service

Years of service (18-29) had a positive effect with 1.27 years of added service ( $p=.001$ ). The only other variable measuring years of service with statistical significance in this model was that of 58 to 100 year olds ( $-0.36, p=.000$ ). These results suggest that for those between the ages of 18 and 29, one year of service increases their retention by 1.27 years. For 58 to 100 year olds, one year of service decreases the remaining years of service by 0.36 years. This is an expected result as the literature review revealed. Younger volunteer firefighters extend their service with each passing year. Older volunteer firefighters decrease their service, but at a markedly lower rate, with each passing year. By comparison, for 44 to 57 year olds, the estimated effect on the dependent variable is  $-0.19$  with marginal significance ( $p=.06$ ). This demonstrates that the positive effects on years of service for younger volunteer firefighters are much higher than the negative effects on older volunteer firefighters. For older volunteers, a year of service decreases their retention but for younger volunteers, an additional year of service increases their retention by a factor of four. Understandably, years of service breed more years of service.

### Institutional Factors

The control variable for suburban population departments was the only statistically significant result among the population type variables. Serving a suburban population results in a decrease of four to five years of service across the three-model specifications. This negative effect from serving suburban populations can be attributed to a number of dynamics discussed in the literature review and previous analysis. First, departments serving suburban populations are more likely to have increased call volumes. This places strains on the volunteer firefighter that can no longer participate in the majority of emergency responses. Second, where call volumes are high in suburban areas, the use of career/paid personnel is encouraged to meet the increased demand for services. I previously demonstrated the high satisfaction associated with values factors, specifically civic responsibility, in this model. The use of career/paid personnel will often reduce or eliminate the civic responsibility among volunteer firefighters, as it is no longer solely their

civic responsibility to respond to incidents. If the volunteer previously asked, who will respond to this incident if I do not, the answer in suburban areas is the career/paid personnel. In rural areas, the answer to this question may be no one. Finally, in suburban areas there is likely to be more businesses and industry. These occupancies demand a higher number of services, such as hazardous materials response and emergency medical care. The same highly satisfying values factors also encompass helping others. If the department that serves these businesses and industries is providing numerous services for which the volunteer possesses no training, the volunteer can no longer help with these types of emergencies. Given the massive satisfaction estimate associated with values satisfaction, the negative effect of suburban areas on the volunteer's retention period can largely be explained.

#### Demographic Factors

Gender also has a large effect on volunteer retention. Females have an estimate of -7.63 ( $p < .001$ ). This suggests that simply having a volunteer firefighter that is female will lower their retention rate by almost seven and one half years. This is not surprising, given the low level of gender diversity in the fire service. Its significance suggests that being female has an extremely powerful negative influence on retention. This supports the work of Yoder and Aniakudo (1997) who found that 92 percent of their female respondents reported different treatment than other firefighters and no respondents reported the difference as positive. In part, the source of this relationship could relate to biological characteristics and the demands of child rearing, but interestingly the control for volunteers with children is insignificant in these models. The fire service often treats female volunteers differently than their male counterparts. Female recruits face a traditional organization dominated by men, within an occupation that demands great physical and emotional strength and one that often lacks other female volunteers with which they can relate. Integration into a fire department is difficult for anyone, but particularly females. When they do assimilate to the organization, they can sometimes be subjected to sexual discrimination or harassment. Their physical and emotional performance is always highly

scrutinized, no matter how well they perform. Finally, the lack of a number of other female volunteers makes it difficult for them to relate to others in the organization and forces them to manage these many problems alone. As Thompson (1993) suggests, recruitment across the community targeting non-traditional candidates such as women could help to alleviate this problem specifically. This research has demonstrated that retention of all volunteer firefighters is difficult. When you consider the added problems with integration, extra scrutiny of performance, and social alienation, it is easy to understand the negative influence on service length that the being female can have.

Being a minority has a similar effect as being female, although the parameter is smaller and weaker statistically (generally  $p < .10$  with a one-tailed test). Minorities tend to face the same challenges that females face. Nevertheless, there is an obvious negative effect for service length of those that are not the traditional (white male) volunteer. Fire service leaders that do nothing to address these problems will be forced to recruit from a declining portion of the population within a context that demands more and more numbers of volunteers. Therefore, these two findings of demographic differences are substantively important reflections of the current insular nature of volunteer fire departments. Really, the status quo is not sustainable and departments can and must branch out and improve levels of satisfaction with service among non-traditional firefighters. Fire service leaders that recognize and address these problems can recruit outside of the classic model of traditional volunteers and increase their staffing. It is important that fire service leaders not only recognize these challenges, but also take steps to minimize or eliminate their effects. The fire service should not tolerate discrimination and harassment. Performance evaluations should be fair, equal, and applied to every volunteer without bias and without consideration of gender or race, while insuring that every volunteer can safely perform emergency work. This will enable departments access to greater numbers of potential volunteers and improve retention by reducing and minimizing the effects of gender and race that are seen in the regression results.

Marriage and children control variables are not statistically significant, but their estimates suggest that they could potentially have a negative effect on service length. This would make sense as those without marital and family commitments have more time to devote to the volunteer fire service.

#### Other Volunteer Characteristics – Light Bars and Radios

The last statistically significant variable is related to equipment (e.g., warning light, siren, radio) in personal vehicle. Its estimate is 4.16 years ( $p=.04$ ), which is quite sizeable. This relates to the previously discussed status and excitement values to volunteers having equipment such as this in their personal vehicles. The warning light, siren and radio provide the volunteer with enhancement satisfaction, particularly excitement. Additionally, this equipment is a status symbol or clear cue of what the volunteer does for the community. Given that many departments do not allow this equipment until the volunteer firefighter becomes fully indoctrinated, the effect of this variable speaks to several others. A fully indoctrinated firefighter can help others by virtue of the training they have received, which relates to values satisfaction and understanding satisfaction. I hypothesized that the effect of this equipment was present in previous chapters. However, the magnitude of the effect of this variable is remarkable. Simply having a light, siren, and/or radio in a volunteer firefighter's personal vehicle increases their retention by over four years. Note that the department providing the equipment to the volunteer does not have a statistically significant effect on service length at all.

Intermittent service shows some very borderline strength (roughly  $p<.10$  one-tailed test). This suggests that joining the volunteer fire service, quitting, and then re-joining has a negative effect on eventual service length. This is intuitive and demonstrates the importance of continuous retention efforts and the ability to keep volunteers engaged in their service. Many that quit will not re-join, and those that do have shorter service lengths.

Family legacy has no statistically significant effect on service length. This is counterintuitive, given the large amount of family firefighters found in both the snowball and representative

samples. There is also a large amount of importance and satisfaction derived from family and friends serving. Family legacy seems to have a much larger effect on influencing volunteers to join and has a limited effect on service length. Consider survey question number 35 which prompted respondents, “If a close friend and/or family member decided to leave the fire department at which you volunteer, how would that affect you?” Only a little over 8% responded that they would consider leaving the fire department also. The remainder (just under 92%) responded that it would have little to no effect. Not a single respondent reported that they would probably leave or definitely leave the department also. This refutes Linardi and McConnell’s (2011) position that individuals are more likely to leave in groups. Family legacy of firefighting may influence recruitment, but ultimately has no statistically significant effect on retention/service length.

*Aggregated Components (Models Four through Seven – Dependent Variable ~ Versus [Relative] Motive [Expectation] / Satisfaction Measurement + Control Variables)*

Table 6.8 outlines the results of four additional model configurations. The first two models simply calculate the aggregated level of satisfaction by weighting the response items according to the expressed levels of importance in terms of initial motives to join and contemporary expectations to serve. The second two models test for a relative effect in terms of respondent satisfaction. In the last two models, the level of satisfaction calculation captures whether satisfaction exceeds the expressed level of import. For example, if the respondent indicated that a factor was moderately important, but was highly satisfied with it, I calculated the dependent variable in a way to reflect that satisfaction exceeded expectations.

The short answer about whether volunteer firefighters consider factors that exceed expectations is – no. The first two models that simply weight expressed satisfaction according to initial motives or contemporary expectations are the most robust model specifications. Really, the results are very close to each other indicating that referencing naïve motives or informed expectations does not really affect the ability to predict variance in the service period.

In terms of the effects of satisfaction both of the direct model specifications show that robust and positive relationship is found between aggregate levels of satisfaction and the respondents' prospective retention period. The two latter models controlling for relative satisfaction calculations miss traditional confidence intervals and thus offer clear indication that no relative effect exists within respondents' retention calculus.

Of the remaining variables, the results from the previous table tend to hold. I again find the significant relationships for the age and years of service control variables. I continue to find evidence of insularity in the negative parameters results associated with female and minority respondents. I also continue to find the surprising and sizeable effects related to fire service equipment and public cues to volunteers' service within the department.

#### *Model Results and Magnitude of Effects Summary*

The use of multiple models enabled a multi-faceted examination of the data with different constructed measurements and control variables. Model three revealed that satisfaction associated with values factors had a highly positive effect on retention (4.75 years,  $p=.05$ ). When considering values factors, moving satisfaction one reported level (i.e., from moderate satisfaction to high satisfaction) could result in a 2.36 to 7.14 year increase in service.

Years of service variables across all models produced expected results. However, the net positive effect compared to the net negative effect is interesting. Volunteers 18 to 29 years of age would increase their retention by slightly more than one year (1.21 years in model three) with each additional year of service. I expected the retention to decrease among older volunteer firefighters. For volunteers 44 to 57 years old, an additional year of service results in only a proportional decrease in the dependent variable (-0.21 year in model two). For 58 to 100 year olds, this estimate is only -0.36 year (models two and three). This suggests that as volunteers age, there is a lower negative effect on their retention and a stronger positive effect on retention among younger volunteers.



Volunteers serving in departments that serve suburban populations, across most models, is significant and results in a large decrease in their retention. The urban variable was not significant in any models. As discussed, this may be due to the introduction of paid personnel, increased call volumes, and lowered civic responsibility for volunteers, which was a highly important and satisfying values related factor. Volunteers serving in suburban populations can realize a decrease of 2.6 to 7.02 years of service according to model three.

Gender was also highly significant across all models. Female volunteers represent a decrease of 5.49 to 10.23 years of service when compared to male volunteers according to model two. This was discussed as unsurprising because of the overall lack of diversity in the fire service.

Equipment (warning light, siren, and radio) in the volunteer's personal vehicle is a tremendous positive influence on the dependent variable. The effects of this variable on retention were both surprising and large. As discussed in Chapter 3, there appeared to be no concern with random sample respondents with the department supplying them the equipment, as the department purchased equipment variable was not statistically significant. Perhaps the volunteers contributing their own money are a sign of internal commitment to the organization. It is also conceivable that many departments do not have the funding to purchase this type of equipment for its volunteers. The equipment likely serves as both a source of excitement and a symbol of the volunteer firefighter's status. That may explain why respondents placed such an emphasis on this variable. In any case, simply having equipment in the personal vehicle of volunteer firefighters can increase retention between 3.9 and 7.72 years, considering the estimate and standard error in model six.

The direct motive/satisfaction measurement and direct expectation/satisfaction measurement were significant and resulted in an increase in retention. When considering the estimate's standard error, one level of increase in satisfaction among the individual responses (i.e., helping others, civic responsibility, etc.) will result in an increase of between two and four months. This may seem minimal when considering the power of some of the other variables. However, if four

individual responses were moved one level of satisfaction (i.e., the satisfaction of civic responsibility, helping others, obtaining training, and excitement provided to the volunteer was changed from moderate levels to high levels), this could add another year or more of service for the volunteer. Of course, fire service leaders must reflect upon the opposite also. Should satisfaction levels for these variables drop among a volunteer firefighter, their retention will decrease by a similar amount. Therefore, it is essential that departments meet the volunteers' expectations in order to provide adequate levels of satisfaction.

### **Chapter Conclusions**

The qualitative methods in this research provided a solid foundation for analyzing satisfaction. By comparison, the qualitative and quantitative results are similar, with some minor differences discussed in this chapter. Values factors are highly satisfying in both results. Understanding expectations are highly satisfying in the qualitative results and moderately satisfying in the quantitative results, although they approach the lower threshold of high satisfaction. Career expectations provide low levels of satisfaction in both results. Social factors are moderately satisfying in both results. Protective factors provide low satisfaction according to the qualitative results and are moderately satisfying in the quantitative results. Finally, enhancement factors are moderately satisfying in the qualitative results and highly satisfying in the quantitative results. Although there is only one level of variance among understanding, enhancement, and protective factors, the difference must be noted. The quantitative results must be favored due to the higher reliability of its larger sample and probability sampling method. As a result, values and enhancement expectations are the most satisfying

When examining the categories of joiners, the study found that across all four categories, satisfaction approximated expectation importance. This suggests that the volunteers within the sample, when separated into their appropriate category, are receiving the level of satisfaction equal to the level of importance for their most important expectation to continue service. Given the framework of this research, these results suggest that if fire departments are treating

individual volunteers according to their respective category of joiner, they are meeting volunteers' expectations and providing adequate levels of satisfaction.

With no retention measurement in the qualitative portion of this research, I used the quantitative methods to draw inferences from the probability sample. Values factors are essential among this sample. *Civic responsibility, helping others, and serving as a role model* (to a lesser degree) are very important expectations to continue service and highly satisfying. When a volunteer firefighter no longer bears the responsibility to help others or cannot (for whatever reason), it will have a significant negative effect on their retention.

The results of years of service were expected. Younger volunteers gain additional years of service with each year of service completed. Simply for younger firefighters, service breeds more service. As expected, the years of service among older volunteers represent a decline in additional years of service. Surprisingly though, this decline was a fraction of what younger volunteers gain. Younger volunteers gain years of service by completing years of service. That gain is much higher than the years of service lost by older volunteers as they mature.

In departments serving suburban populations, wherein call volumes are higher, mobility around the community may be more problematic, the use of paid/career personnel is more likely, and the department is likely to be more structured, has a negative effect on retention. When considering values factors (such as *civic responsibility* and *helping others*), which have been established as providing tremendous positive influences on retention, departments serving suburban/urban populations are less conducive to providing volunteers these opportunities than rural communities where volunteers are responsible for everything associated with the service.

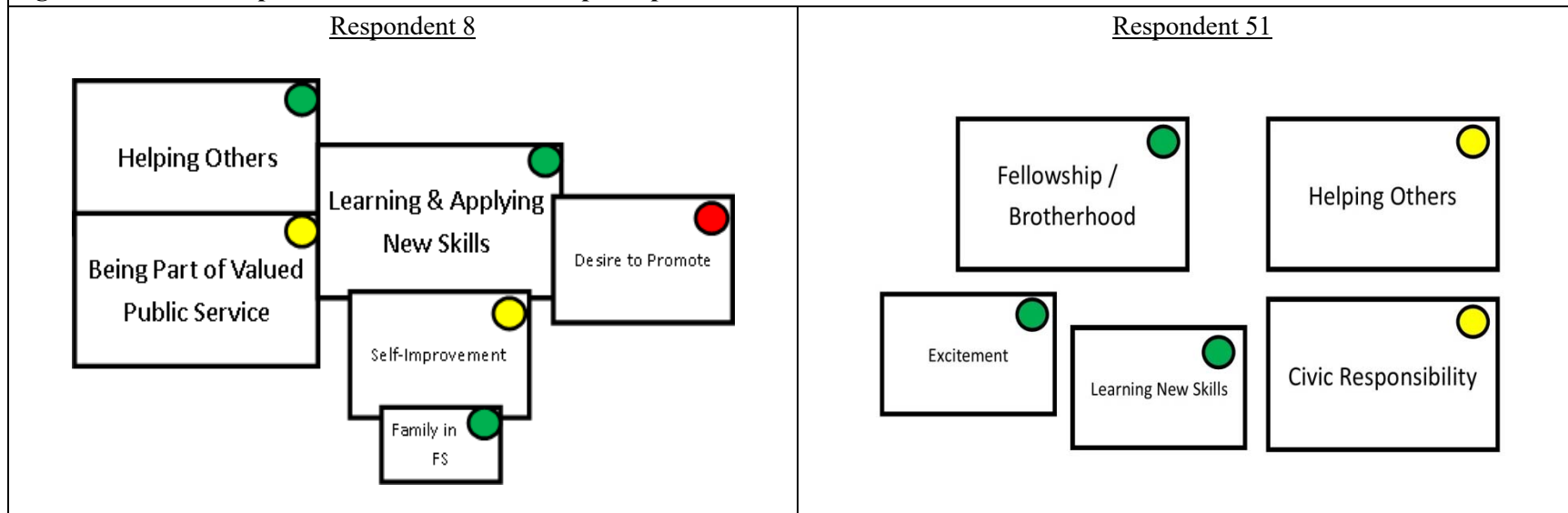
The fire service has a history of being a male dominated occupation. Although more females are joining the fire service, they represent only a small fraction of its ranks. As a volunteer firefighter, being female has a tremendous negative effect on retention. The cultural and macro-level issues causing this may be outside the scope of this research. However, it is worth mentioning one point. The fire service history of male domination of the ranks somewhat stems

from the historical nature of the work. In today's fire service, there are female volunteer firefighters that are just as capable of performing the physically demanding work associated with fighting fires as many men in the service. Moreover, fighting fires has become a low frequency task. Therefore, fire service leaders should consider active recruitment of female volunteers and consider this overall negative influence of gender to improve the retention of females in the fire service.

Expectations to continue service have a slightly higher influence on retention than the motives used to join the fire service. This confirms that there is somewhat of a motive/expectation drift among volunteer firefighters. Although satisfaction is ultimately important and statistically significant in both the direct motive/satisfaction and expectation/satisfaction measurements, the higher influence of expectations was demonstrated. Therefore, meeting volunteers' expectations is essential to providing them satisfaction. This will ultimately increase retention and without this, the opposite will almost certainly occur.

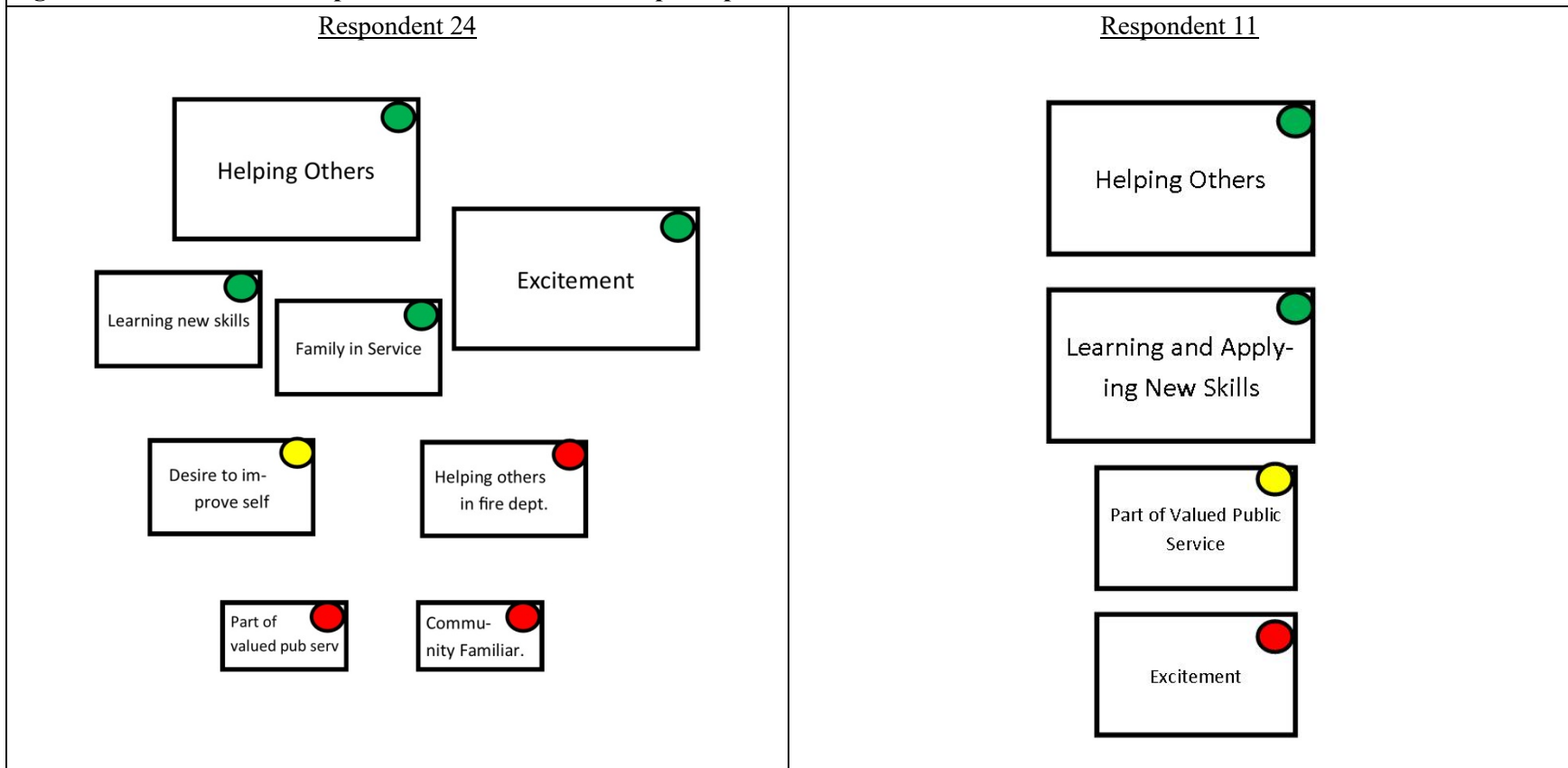
This chapter answered research question number three. The overall decline in the numbers of volunteer firefighters would suggest that departments are doing fairly well at meeting volunteers' expectations and therefore providing them satisfaction. Despite the appearance that departments are doing well, this research provides suggestions for improving volunteer recruitment and retention. The fire service can no longer solely rely on the insular social networks that have produced generations of volunteer firefighters in the past. Instead, fire service leaders must begin to consider the differences between volunteers, the use of values, enhancement, and particularly understanding factors in recruitment and retention, and consider the various influential control variables in this research, such as marital status, gender/race, and radio/gear/equipment. In the next chapter, I will discuss overall research conclusions, recommendations, and suggestions for future research of this important topic.

**Figure 6.1: Values Expectation/Satisfaction Concept Map**



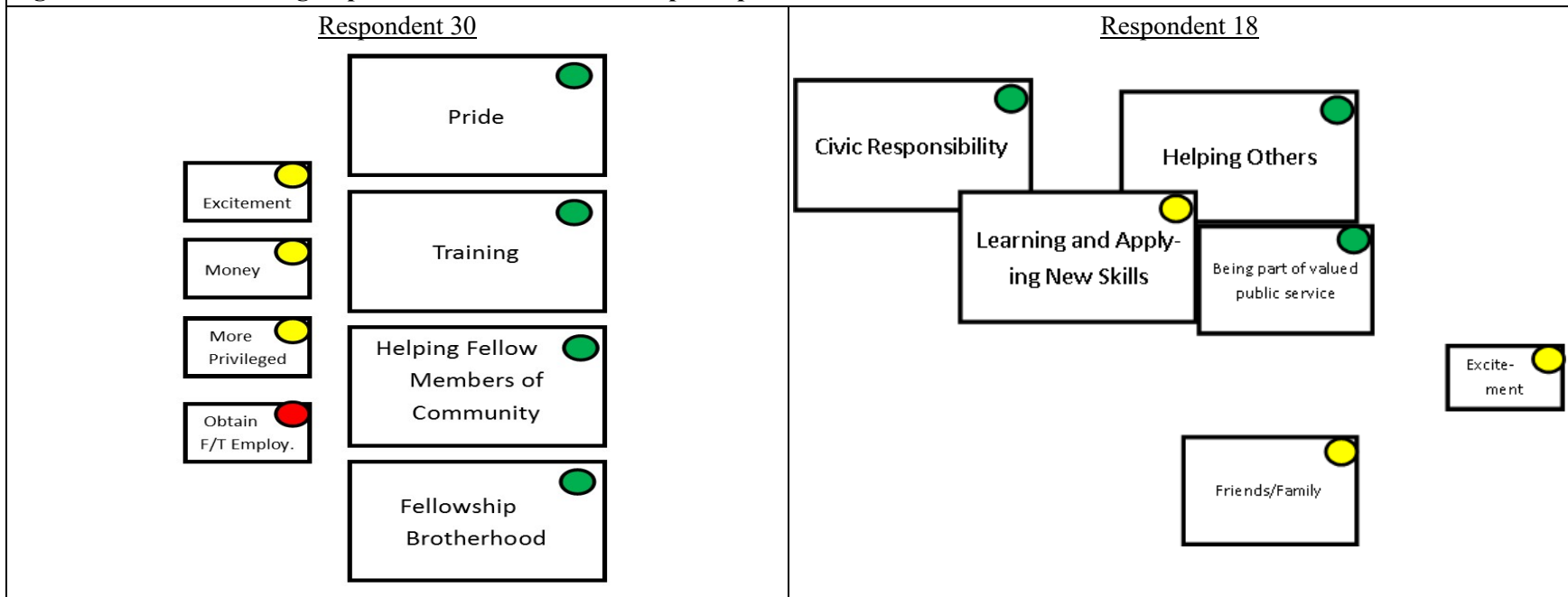
Note: This concept map represents actual data from snowball sample respondents 8 and 51 as examples of respondents with varying levels of importance for values expectations to continue serving. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

**Figure 6.2: Enhancement Expectation/Satisfaction Concept Map**



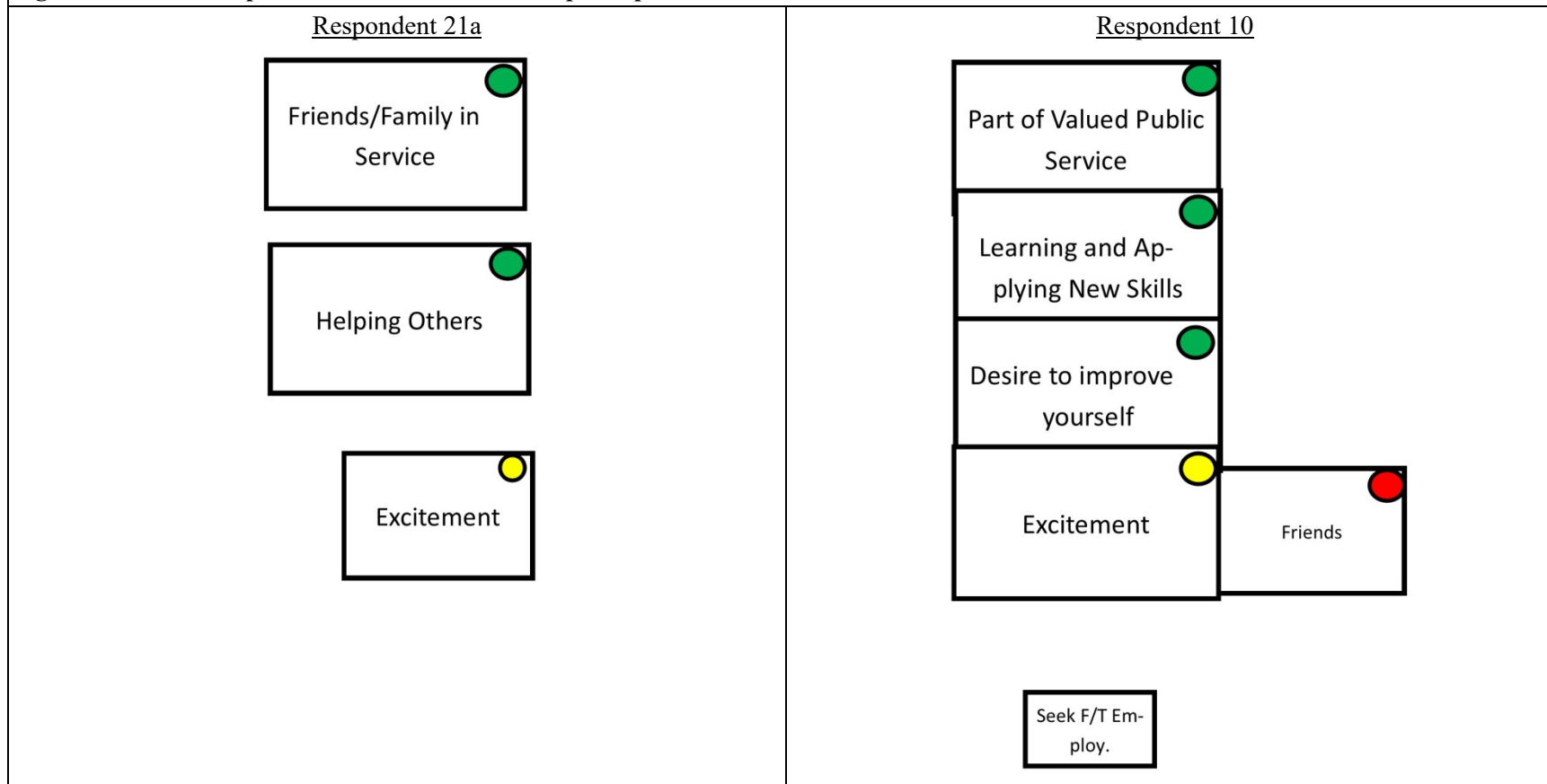
Note: This concept map represents actual data from snowball sample respondents 24 and 11 as examples of respondents with importance emphasis on enhancement motives to join. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

**Figure 6.3: Understanding Expectation/Satisfaction Concept Map**



Note: This concept map represents actual data from snowball sample respondents 30 and 18 as examples of a respondents with importance emphasis on understanding motives to join. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

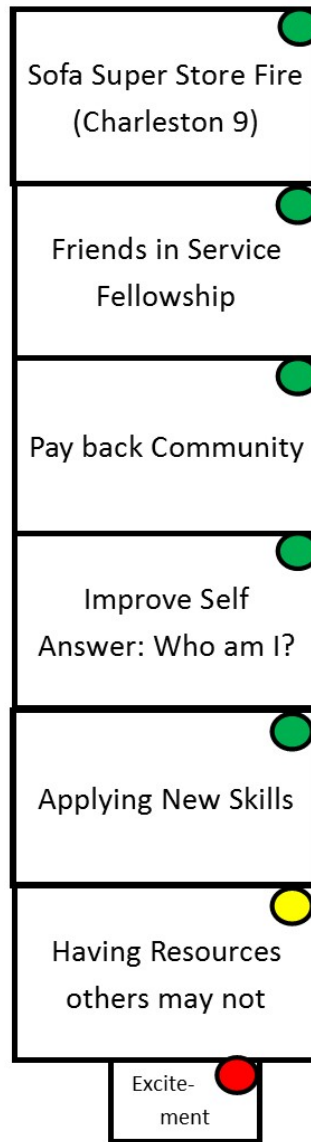
**Figure 6.4: Social Expectation/Satisfaction Concept Map**



Note: This concept map represents actual data from snowball sample respondents 21a and 10 as examples of respondents with an importance emphasis on social motives to join. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

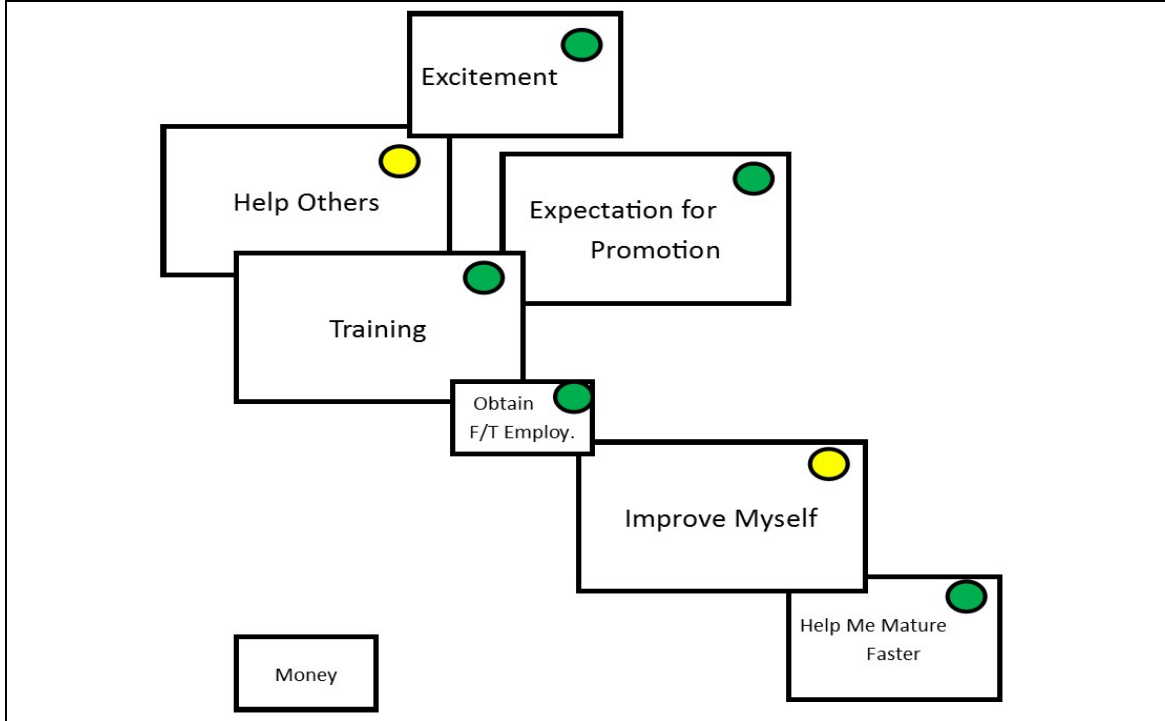


**Figure 6.5: Protective Expectation/Satisfaction Concept Map**



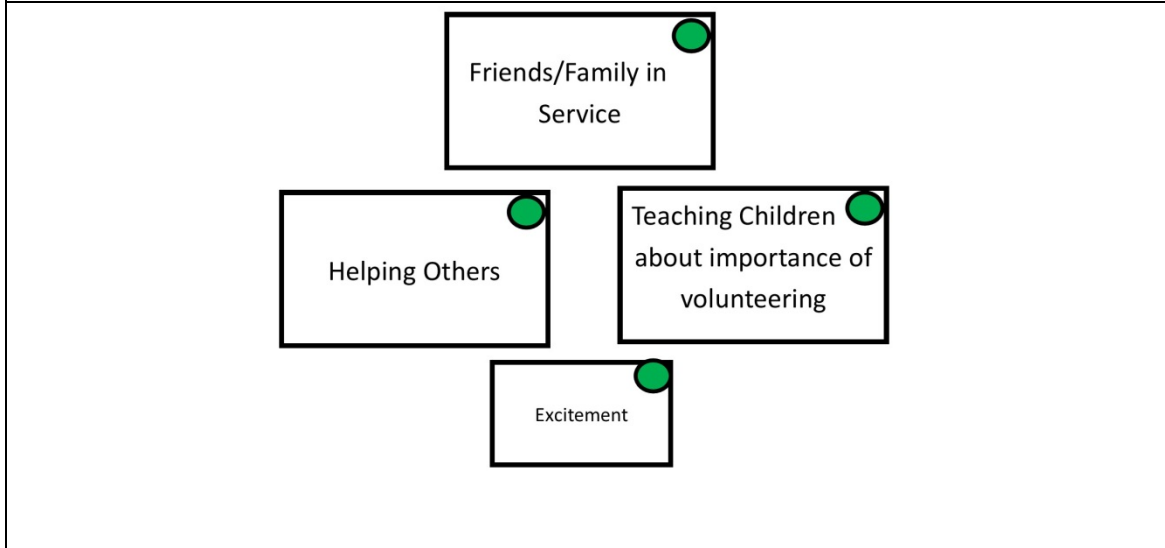
Note: This concept map represents actual data from snowball sample respondent 6 as an example of a respondent with an importance emphasis on protective motives to join. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

**Figure 6.6: Career Expectation/Satisfaction Concept Map**



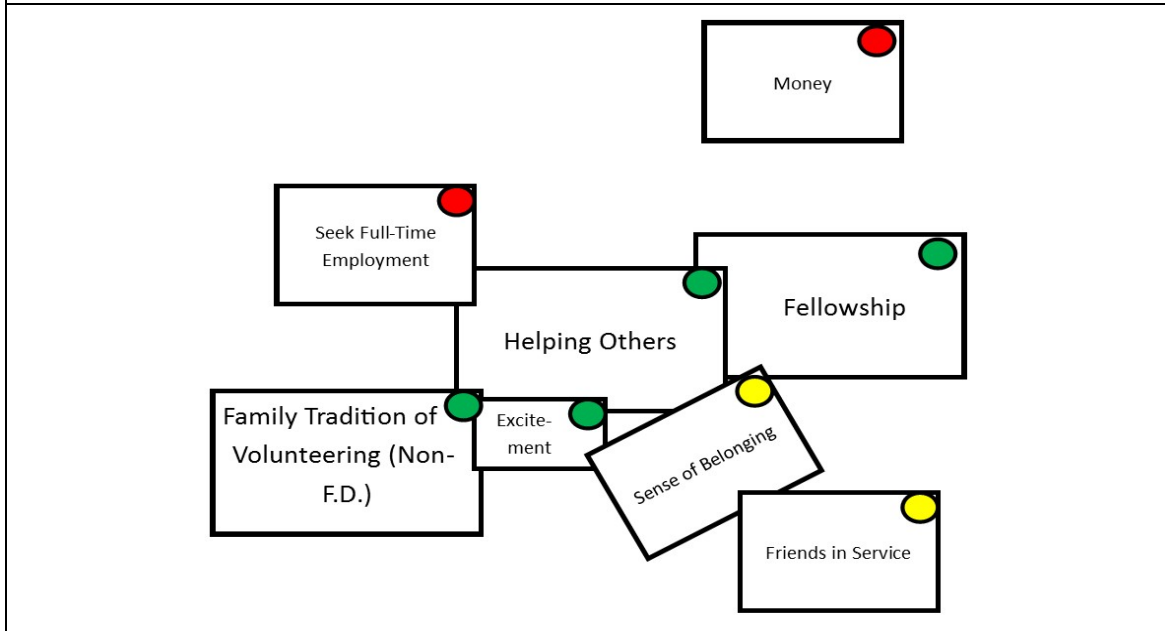
Note: This concept map represents actual data from snowball sample respondent 17 as an example of a respondent with an importance emphasis on protective motives to join. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

**Figure 6.7: Expectation/Satisfaction Map for Family Firefighters**



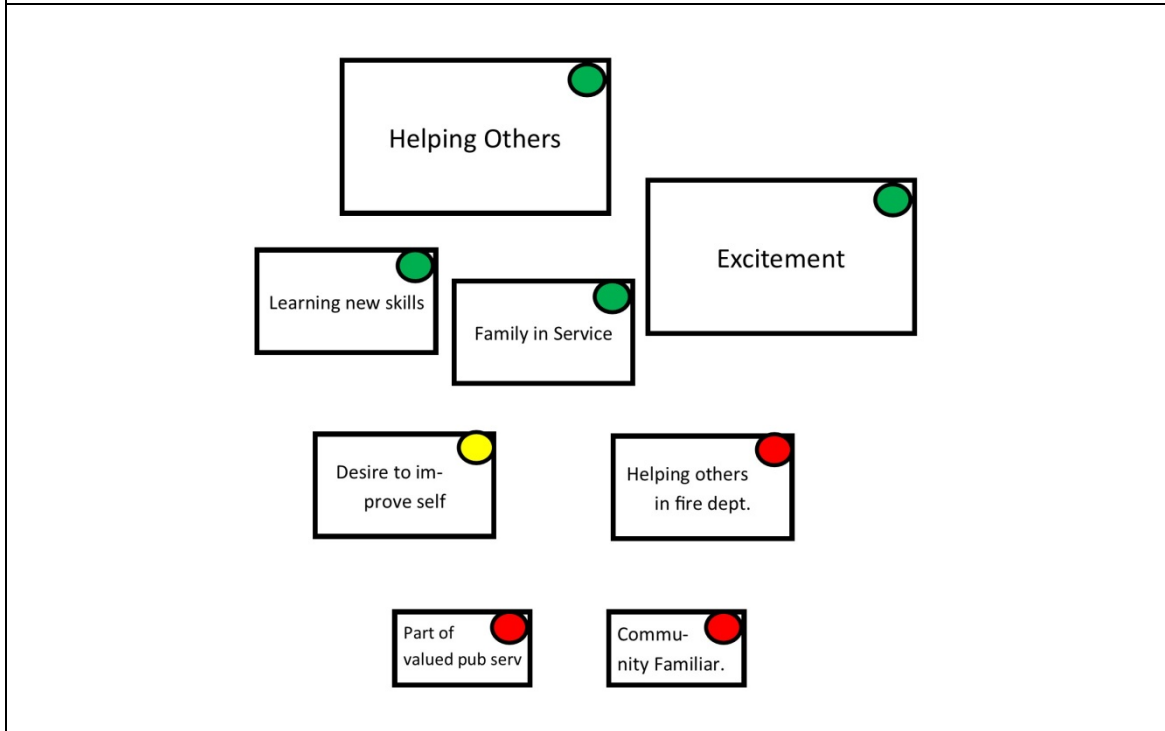
Note: This concept map represents actual data from snowball sample respondent 43 as an example of a family firefighter's expectation/satisfaction map. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

**Figure 6.8: Expectation/Satisfaction Map for Altruists**



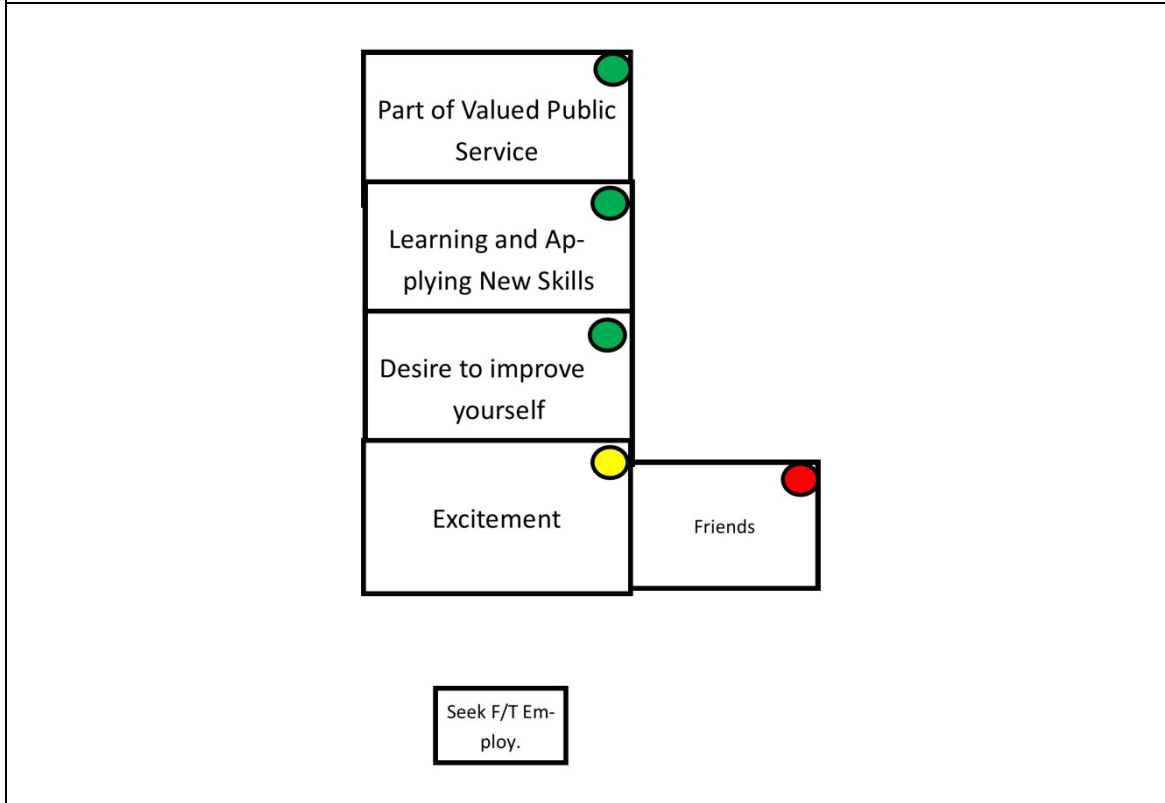
Note: This concept map represents actual data from snowball sample respondent 45 as an example of an altruist's expectation/satisfaction map. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

**Figure 6.9: Expectation/Satisfaction Map for Excitement/Risk Junkies**



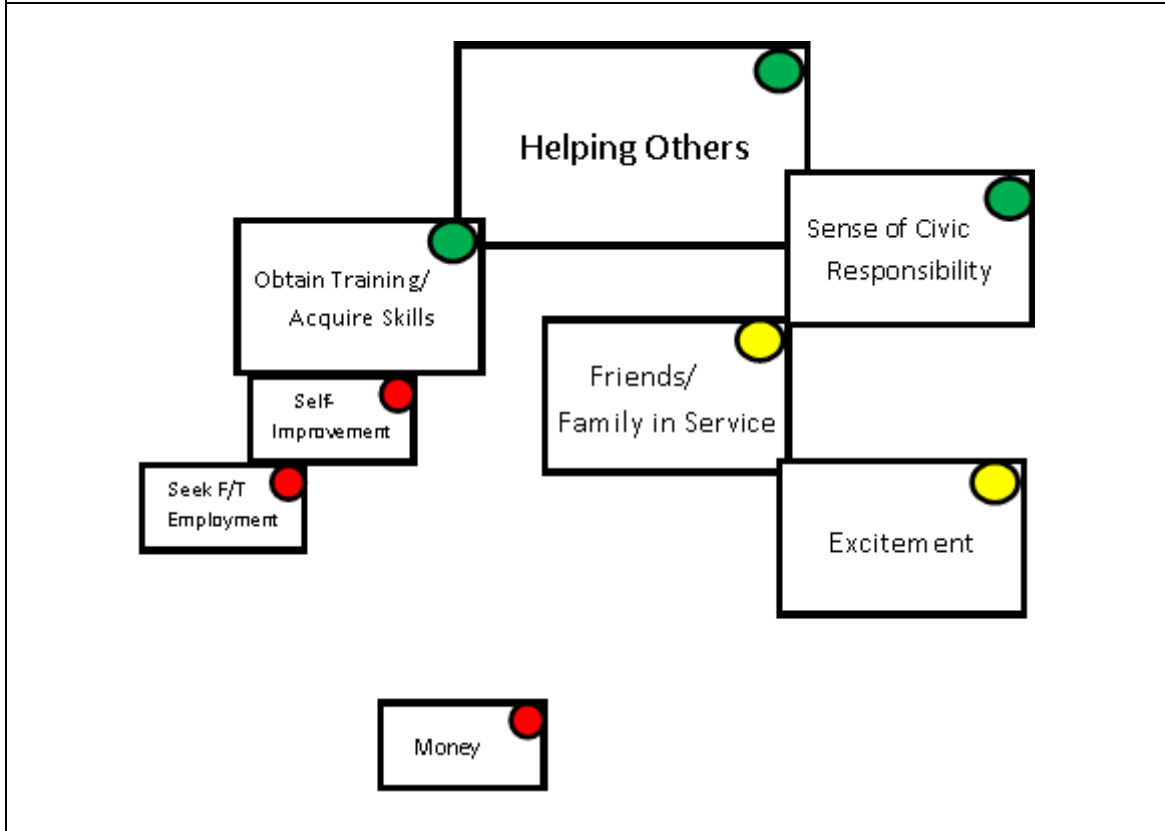
Note: This concept map represents actual data from snowball sample respondent 24 as an example of an excitement/risk junkie's expectation/satisfaction map. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

**Figure 6.10: Expectation/Satisfaction Map for Learners**



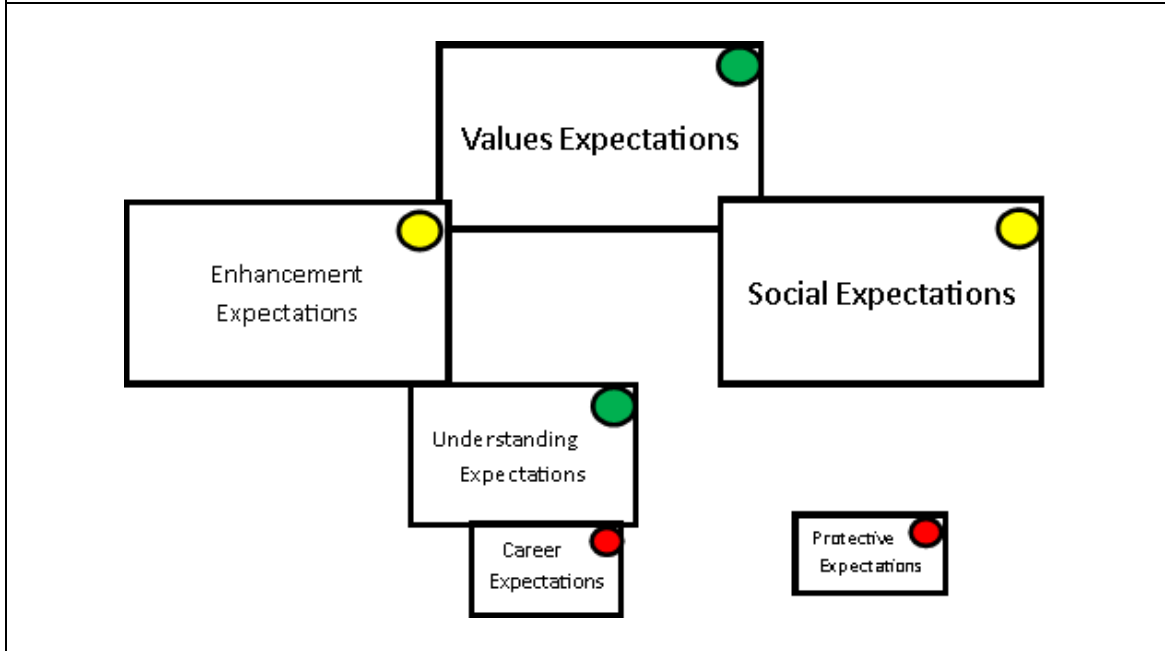
Note: This concept map represents actual data from snowball sample respondent 10 as an example of a learner's expectation/satisfaction map. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

**Figure 6.11: Qualitative Satisfaction of Individual Responses**



Note: This map is the aggregate of individual responses for expectations/satisfaction collected during interviews and concept mapping exercises from snowball sample respondents. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

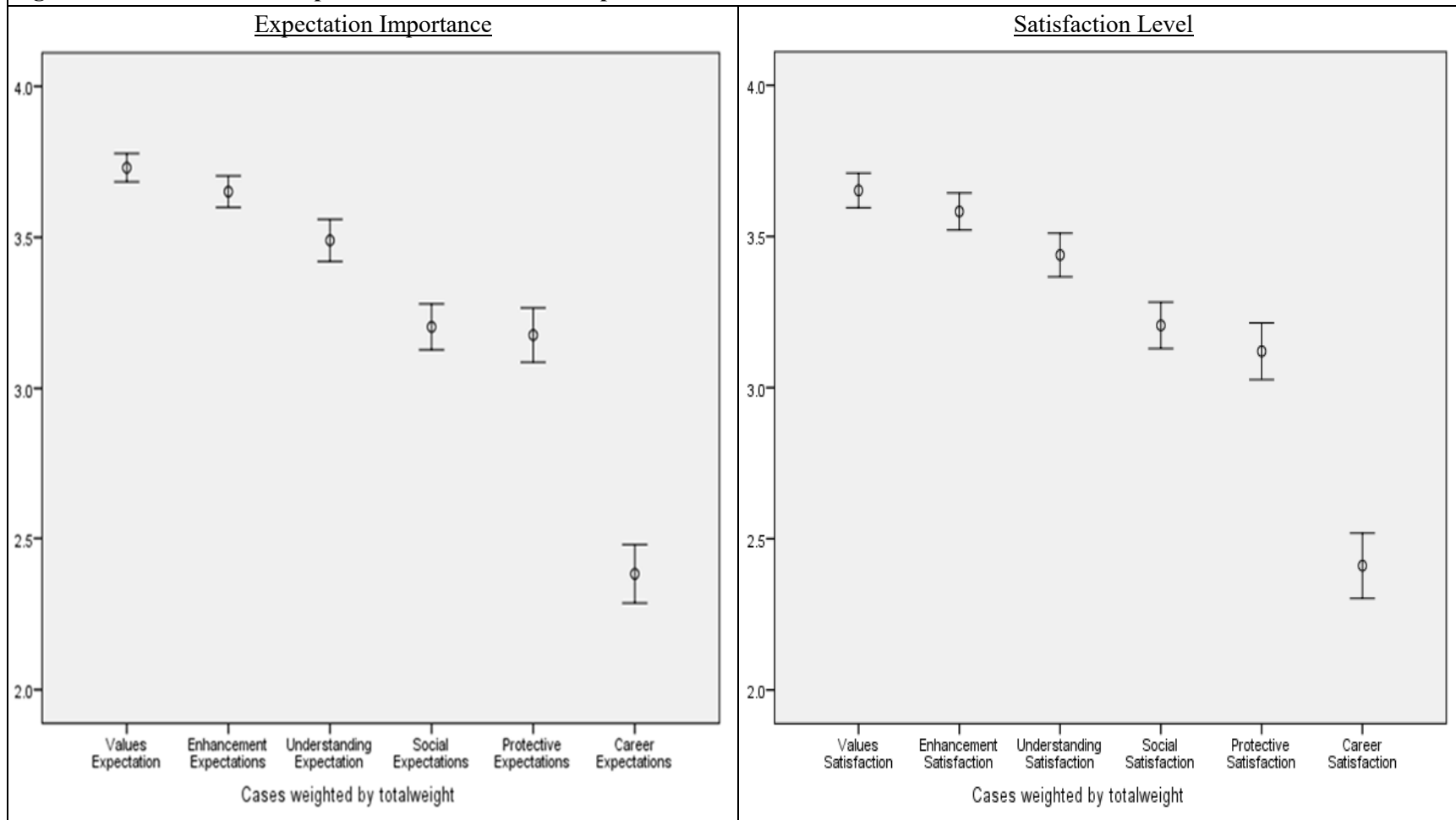
**Figure 6.12: Aggregate Expectation/Satisfaction Concept Map**



Note: This map is the aggregate of coded responses for expectations/satisfaction collected during interviews and concept mapping exercises from snowball sample respondents. Large boxes represent highly important expectations, medium sized boxes represent moderately important expectations, and expectations represented by small boxes are those with low importance. Green dots represent high satisfaction, yellow dots represent moderate satisfaction, and red dots represent low satisfaction.

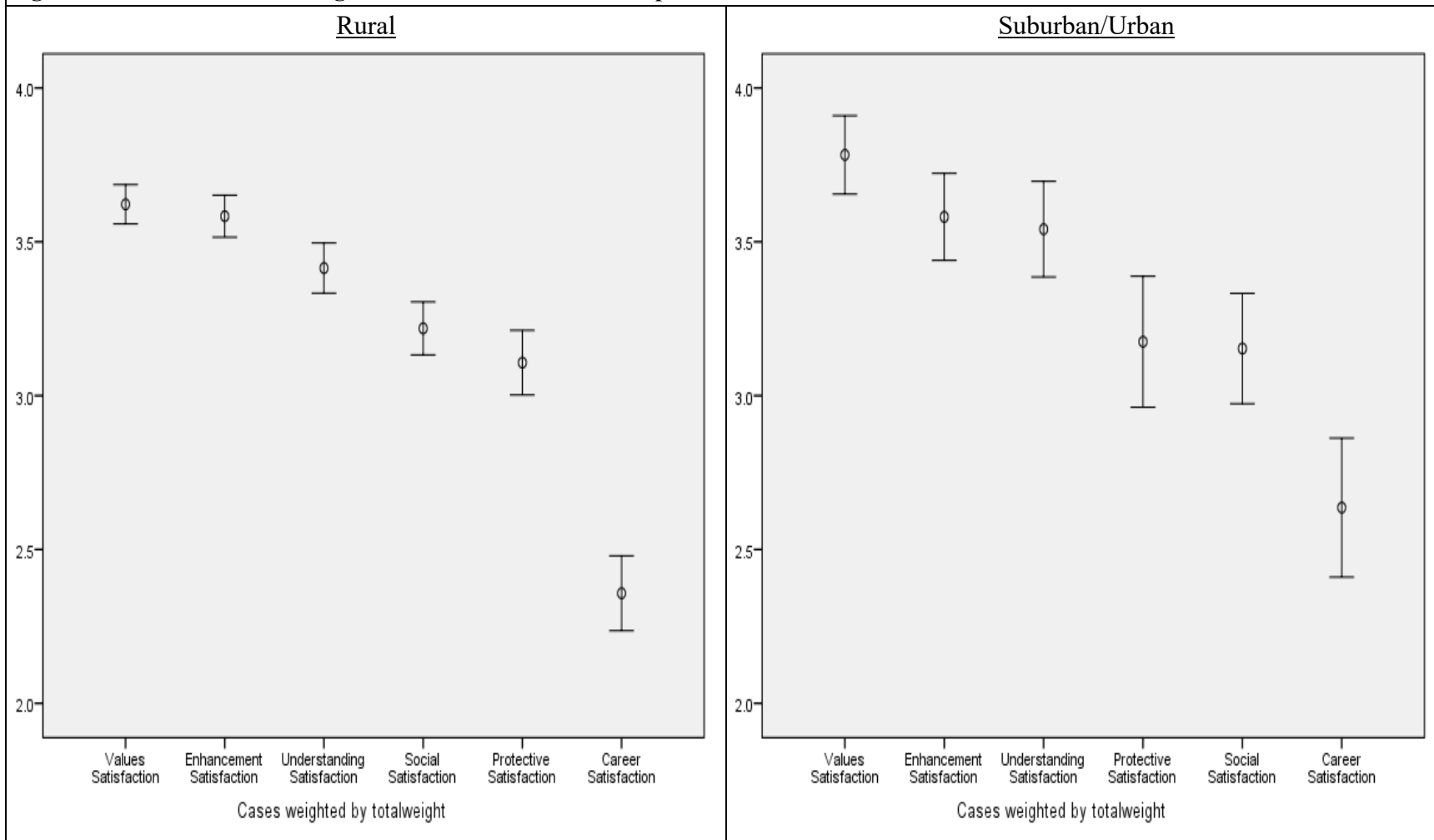


**Figure 6.13: Quantitative Expectation/Satisfaction Comparison**



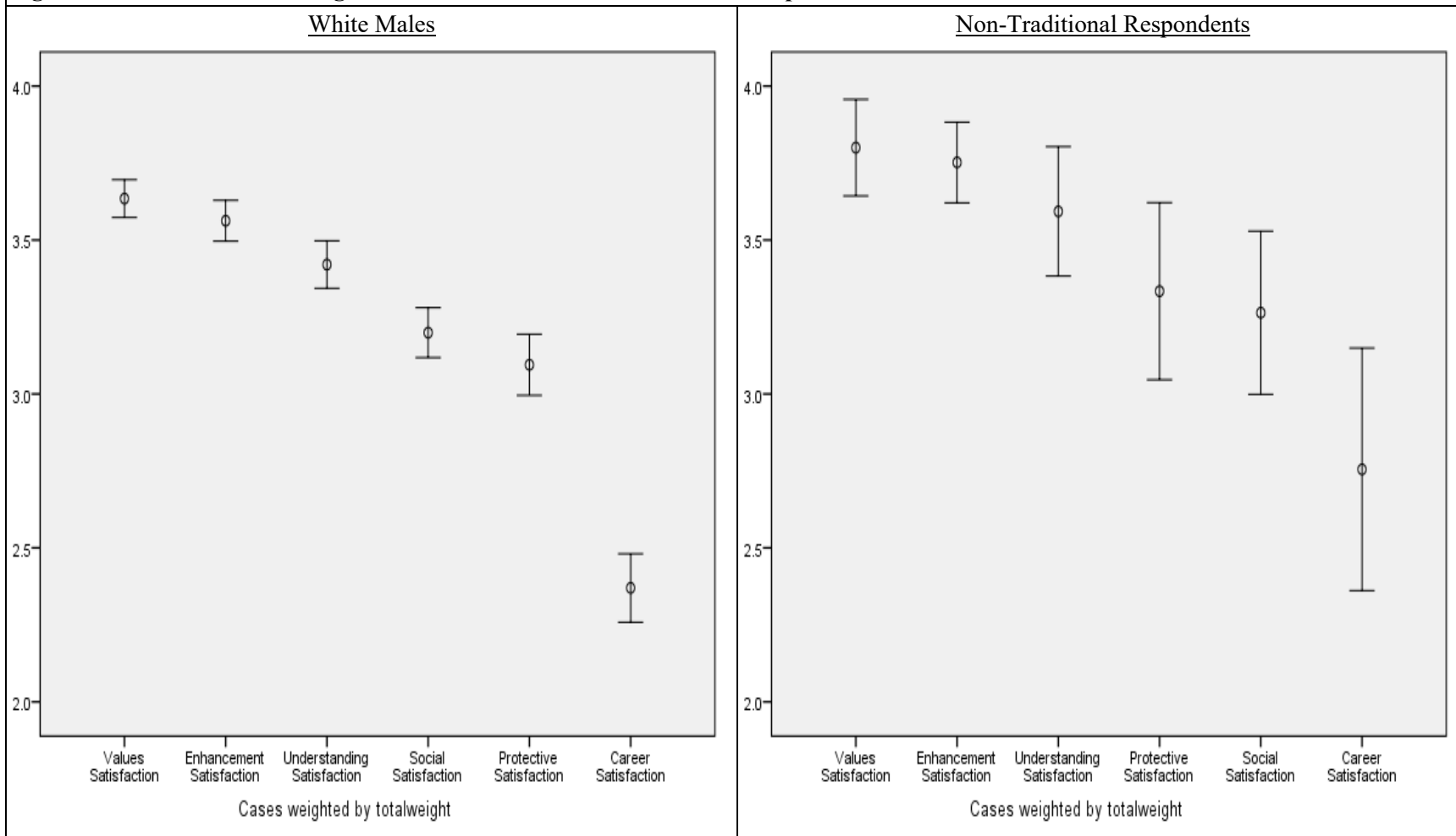
Note: n = 217. These error bar plots represent the importance of expectations to continue serving and satisfaction in service scores in the quantitative results from the random sample respondents. Confidence interval = 95%.

**Figure 6.14: Satisfaction Among Rural, Suburban/ Urban Respondents**



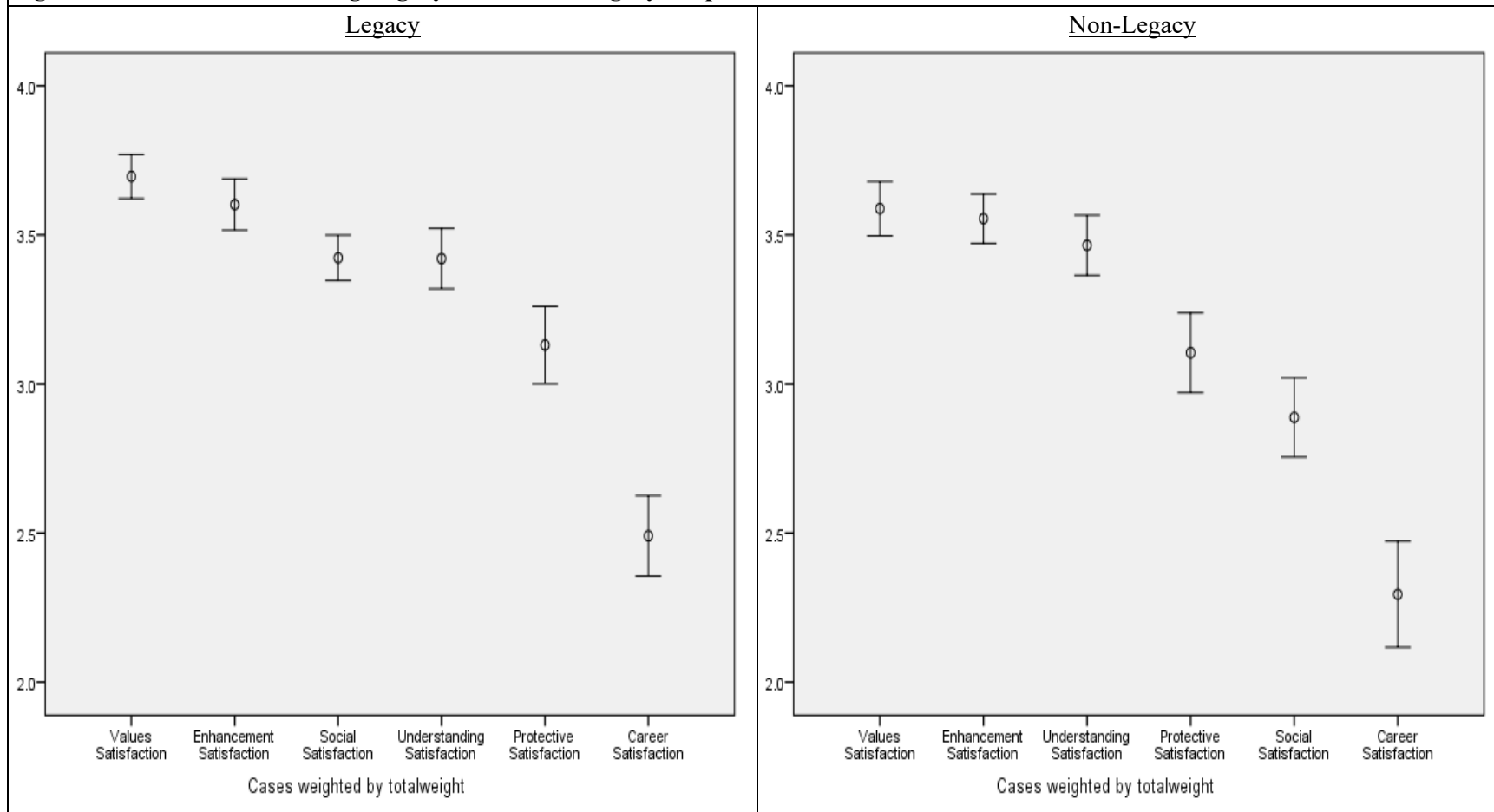
Note: Results are from random sample respondents. Results are from random sample respondents. A score of 1 = no satisfaction, 2 = low satisfaction, 3 = moderate satisfaction, 4 = high satisfaction. Rural n = 158, Suburban/Urban n = 59, Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 6.15: Satisfaction among White Males versus Non-Traditional Respondents**



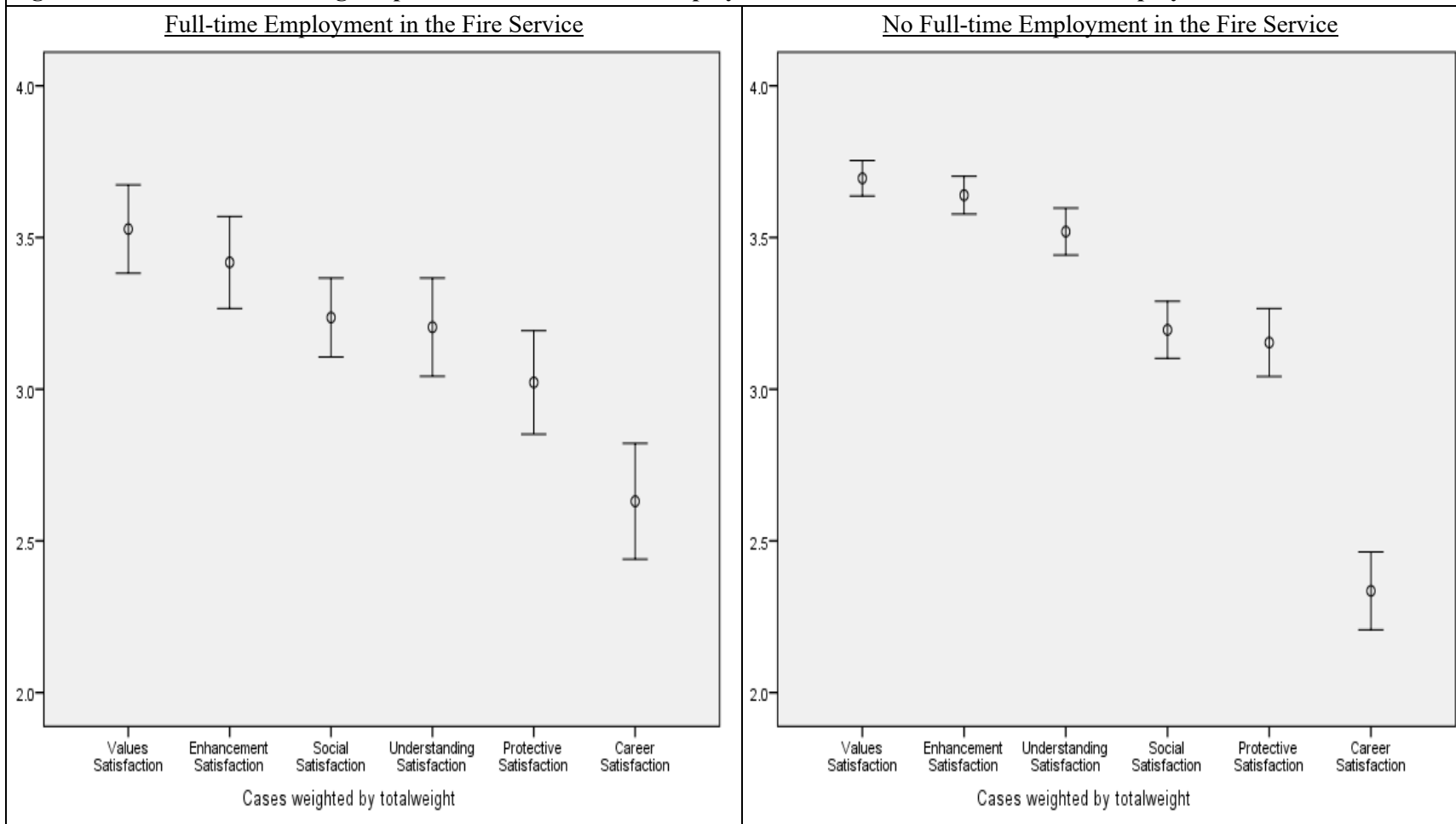
Note: Results are from random sample respondents. A score of 1 = no satisfaction, 2 = low satisfaction, 3 = moderate satisfaction, 4 = high satisfaction. White male n = 161, respondents not white male n = 56. Confidence interval = 95%. Non-traditional respondents include any respondent that is not white and male. Mean values were weighted according to the appropriate population weights.

**Figure 6.16: Satisfaction Among Legacy versus Non-Legacy Respondents**



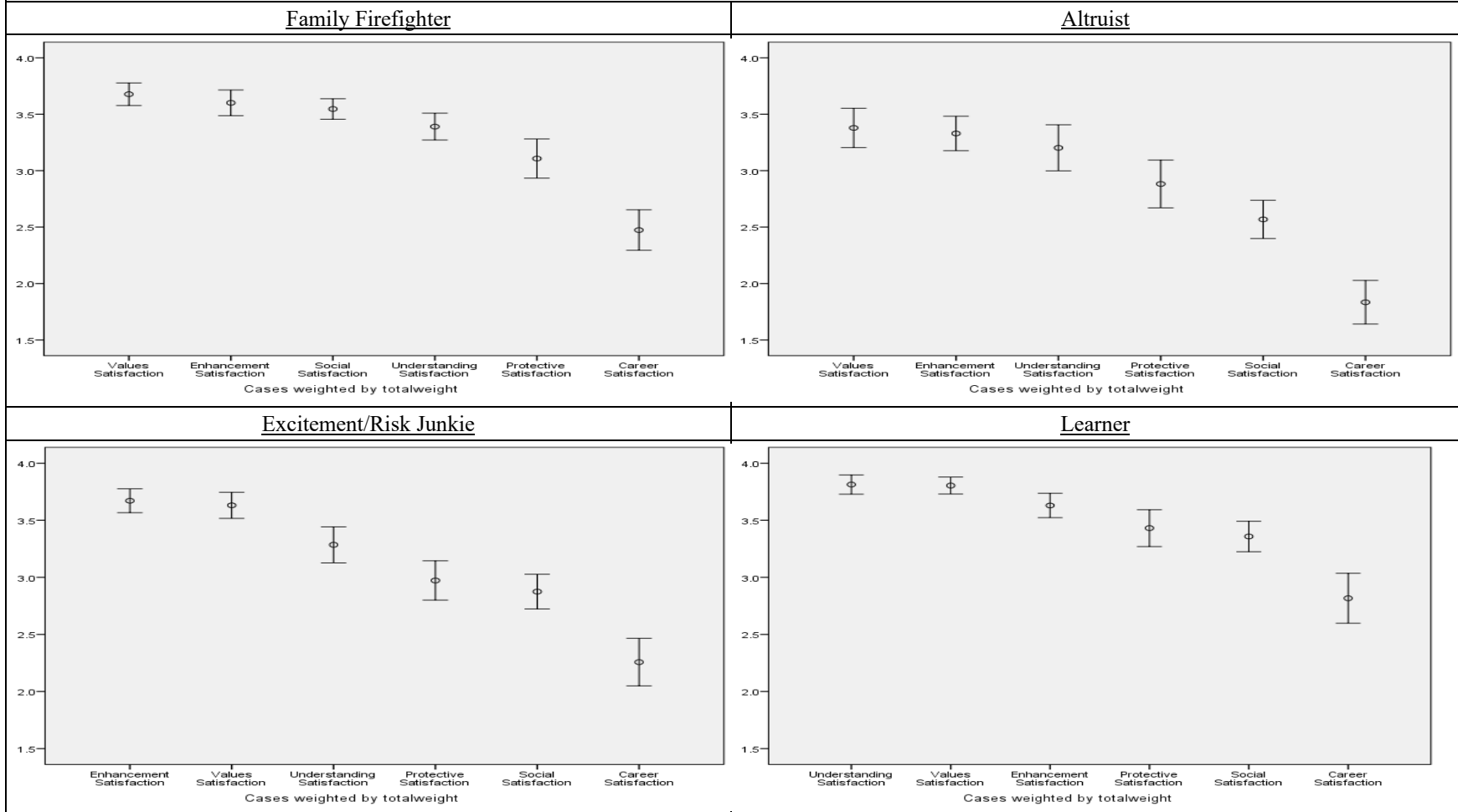
Note: Results are from random sample respondents. A score of 1 = no satisfaction, 2 = low satisfaction, 3 = moderate satisfaction, 4 = high satisfaction. Legacy n = 125, Non-legacy n = 92. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 6.17: Satisfaction among Respondents with Full-time Employment and those without Full-time Employment in the Fire Service**



Note: Results are from random sample respondents. A score of 1 = no satisfaction, 2 = low satisfaction, 3 = moderate satisfaction, 4 = high satisfaction. Full-time employment in Fire Service n = 63, No Full-time employment in Fire Service n = 154. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Figure 6.18: Satisfaction Among Categories of Joiners**



Note: This error bar plot represents the expectations to continue service importance and associated satisfaction from the random sample respondents, family firefighter category of joiner subset. A score of 1 = not important/no satisfaction, 2 = low importance/satisfaction, 3 = moderate importance/satisfaction, 4 = high importance/satisfaction. Family Firefighter n = 85, Altruist n = 40, Excitement/Risk Junkie n = 45, Learners n = 47. Confidence interval = 95%. Mean values were weighted according to the appropriate population weights.

**Table 6.1: Individual Quantitative Satisfaction Responses**

<u>Satisfaction from Service</u>	<u>Clary, et al. Factor</u>	<u>Min.</u>	<u>Max.</u>	<u>Mean</u>	<u>Std. Dev.</u>
Helping others	Values	1	4	3.77	.498
Civic responsibility	Values	1	4	3.75	.565
Feeling of accomplishment	Enhancement	1	4	3.65	.569
Being member of a valued public service	Enhancement	1	4	3.57	.666
Obtaining training	Understanding	1	4	3.56	.626
Fellowship	Social	1	4	3.55	.626
Excitement	Enhancement	1	4	3.53	.698
Serving as role model	Values	1	4	3.44	.763
Acquiring skills	Understanding	1	4	3.31	.829
Possessing sufficient resources to volunteer	Protective	1	4	3.19	.853
Close friend/family member	Protective	1	4	3.14	1.016
Payback the community for own successes	Social	1	4	3.05	1.021
Acquaintance	Social	1	4	2.93	1.073
Networking with community/business leaders	Career	1	4	2.83	1.018
Gaining employment	Career	1	4	2.49	1.262
Supplemental income	Career	1	4	1.92	1.212

Notes: n = 217. A score of 1 = no satisfaction, 2 = low satisfaction, 3 = moderate satisfaction, 4 = high satisfaction. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.

**Table 6.2: Individual Quantitative Expectation Importance/Satisfaction Response Comparison**

<u>Response Item</u>	<u>Expectation</u>		<u>Satisfaction</u>		<u>Difference</u>
	<u>Mean</u>	<u>Std. Dev.</u>	<u>Mean</u>	<u>Std. Dev.</u>	
Helping others	3.87	.371	3.77	.498	-0.10
Civic responsibility	3.82	.454	3.75	.565	-0.07
Feeling of accomplishment	3.69	.536	3.65	.569	-0.04
Being member of a valued public service	3.67	.543	3.57	.666	-0.10
Obtaining training	3.66	.552	3.56	.626	-0.10
Fellowship	3.62	.574	3.55	.626	-0.07
Excitement	3.59	.646	3.53	.698	-0.06
Serving as role model	3.50	.716	3.44	.763	-0.06
Acquiring skills	3.32	.818	3.31	.829	-0.01
Possessing sufficient resources to volunteer	3.28	.840	3.19	.853	-0.09
Close friend/family member	3.05	1.019	3.14	1.016	+0.09
Payback the community for own successes	3.07	.939	3.05	1.021	-0.02
Acquaintance	2.94	1.079	2.93	1.073	-0.01
Networking with community/business leaders	2.88	.988	2.83	1.018	-0.05
Gaining employment	2.46	1.127	2.49	1.262	+0.03
Supplemental income	1.81	1.090	1.92	1.212	+0.11

Note: n = 217. A score of 1 = not important/no satisfaction, 2 = low importance/satisfaction, 3 = moderate importance/satisfaction, 4 = high importance/satisfaction. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.



**Table 6.3: Quantitative Satisfaction Responses by Factor**

<u>Clary Factor</u>	<u>Min.</u>	<u>Max.</u>	<u>Mean</u>	<u>Std. Dev.</u>
Values Satisfaction	1.33	4.00	3.65	.469
Enhancement Satisfaction	1.67	4.00	3.58	.500
Understanding Satisfaction	1.00	4.00	3.44	.592
Social Satisfaction	1.00	4.00	3.21	.630
Protect Satisfaction	1.00	4.00	3.12	.767
Career Satisfaction	1.00	4.00	2.41	.882

Notes: n = 217. A score of 1 = no satisfaction, 2 = low satisfaction, 3 = moderate satisfaction, 4 = high satisfaction. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.

**Table 6.4: Quantitative Survey Responses Expectation/Satisfaction Comparison by Factor**

	<u>Expectation Importance</u>		<u>Satisfaction</u>		<u>Difference</u>
	<u>Mean</u>	<u>Std. Dev.</u>	<u>Mean</u>	<u>Std. Dev.</u>	
Values expectations	3.73	.385	3.65	.469	-0.08
Enhancement expectations	3.65	.426	3.58	.500	-0.07
Understanding expectations	3.49	.572	3.44	.592	-0.05
Social expectations	3.20	.620	3.21	.630	+0.01
Protective expectations	3.18	.735	3.12	.767	-0.06
Career expectations	2.38	.793	2.41	.882	+0.03

Note: A score of 1 = not important/no satisfaction, 2 = low importance/satisfaction, 3 = moderate importance/satisfaction, 4 = high importance/satisfaction. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.

<u>Control</u>	<u>n</u>	<u>Values</u> <u>Satisfaction</u>	<u>Understanding</u> <u>Satisfaction</u>	<u>Career</u> <u>Satisfaction</u>	<u>Social</u> <u>Satisfaction</u>	<u>Protective</u> <u>Satisfaction</u>	<u>Enhancement</u> <u>Satisfaction</u>
Mostly volunteer	111	3.58	3.37	2.53	3.15	3.22	3.52
Wholly volunteer	106	3.67	3.46	2.38	3.22	3.10	3.60
Rural	158	<b><u>3.62</u></b>	3.41	<b><u>2.36</u></b>	3.22	3.11	3.58
Suburban / Urban	59	<b><u>3.78</u></b>	3.54	<b><u>2.63</u></b>	3.15	3.18	3.58

Note: A score of 0 = no satisfaction, 1 = low satisfaction, 2 = moderate satisfaction, 3 = high satisfaction. Highlighted scores represent statistically significant differences of means. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.

**Table 6.6: Quantitative Satisfaction by Demographic Control Variable**

<u>Control</u>	<u>n</u>	<u>Values</u> <u>Satisfaction</u>	<u>Understanding</u> <u>Satisfaction</u>	<u>Career</u> <u>Satisfaction</u>	<u>Social</u> <u>Satisfaction</u>	<u>Protective</u> <u>Satisfaction</u>	<u>Enhancement</u> <u>Satisfaction</u>
Age <= 43	120	3.68	3.42	<b><u>2.61</u></b>	3.24	<b><u>3.26</u></b>	3.59
Age >43	97	3.62	3.46	<b><u>2.20</u></b>	3.17	<b><u>2.98</u></b>	3.57
Traditional (White male)	161	3.63	3.42	<b><u>2.37</u></b>	3.20	3.09	<b><u>3.56</u></b>
Non-traditional	56	3.80	3.59	<b><u>2.76</u></b>	3.26	3.33	<b><u>3.75</u></b>
Married	154	<b><u>3.60</u></b>	<b><u>3.34</u></b>	<b><u>2.24</u></b>	<b><u>3.16</u></b>	<b><u>2.99</u></b>	<b><u>3.53</u></b>
Unmarried	63	<b><u>3.80</u></b>	<b><u>3.71</u></b>	<b><u>2.90</u></b>	<b><u>3.34</u></b>	<b><u>3.47</u></b>	<b><u>3.74</u></b>
Children	161	3.63	3.43	<b><u>2.31</u></b>	3.21	3.08	<b><u>3.54</u></b>
No Children	56	3.74	3.46	<b><u>2.74</u></b>	3.19	3.24	<b><u>3.70</u></b>
Years of Service <= 19	129	<b><u>3.72</u></b>	<b><u>3.53</u></b>	<b><u>2.64</u></b>	3.20	<b><u>3.32</u></b>	3.64
Years of Service >19	88	<b><u>3.57</u></b>	<b><u>3.33</u></b>	<b><u>2.15</u></b>	3.21	<b><u>2.89</u></b>	3.52
Legacy Firefighter	125	3.70	3.42	2.49	<b><u>3.42</u></b>	3.13	3.60
Non-Legacy Firefighter	92	3.59	3.47	2.29	<b><u>2.89</u></b>	3.10	3.55
Continuous Service	187	3.65	3.45	2.41	3.23	3.11	3.57
Intermittent Service	30	3.65	3.35	2.40	2.97	3.21	3.67
FTE in Fire Service	63	<b><u>3.53</u></b>	<b><u>3.20</u></b>	<b><u>2.63</u></b>	3.24	<b><u>3.02</u></b>	<b><u>3.42</u></b>
No FTE in Fire Service	154	<b><u>3.70</u></b>	<b><u>3.52</u></b>	<b><u>2.34</u></b>	3.20	<b><u>3.15</u></b>	<b><u>3.64</u></b>

Note: A score of 0 = Not Important, 1 = Low Importance, 2 = Moderate Importance, 3 = High Importance. Highlighted scores represent statistically significantly difference of means. Results are from random sample respondents. Mean values were weighted according to the appropriate population weights.

**Table 6.7: Weighted Least Squares Estimates of the Anticipated Service Period – Disaggregated Components**

Control Variable	Motive to Join			Expectation to Serve			Satisfaction with Service		
	$\beta$	(s.e.)	$\rho$	$\beta$	(s.e.)	$\rho$	$\beta$	(s.e.)	$\rho$
Values	3.30	2.57	.20	5.04	2.79	.07	4.75	2.39	.05
Enhancement	1.55	2.27	.50	2.14	2.54	.40	3.43	2.33	.14
Understanding	-1.14	1.63	.49	-1.36	1.81	.46	-2.05	1.83	.26
Social engagement	-1.88	1.68	.27	-1.56	1.73	.37	-1.55	1.73	.37
Protective	-0.09	1.55	.96	0.25	1.52	.87	0.64	1.44	.66
Career	1.73	1.50	.25	0.57	1.40	.69	0.40	1.36	.77
Age 18-29 * Years of service	1.23	0.41	.003	1.23	0.41	.003	1.27	0.40	.002
Age 30-43 * Years of service	0.16	0.16	.33	0.16	0.16	.33	0.17	0.16	.28
Age 44-57 * Years of service	-0.19	0.10	.05	-0.21	0.10	.04	-0.19	0.10	.06
Age 58-100 * Years of service	-0.33	0.10	.001	-0.36	0.10	<.001	-0.36	0.09	<.001
Mostly volunteer	-1.93	1.81	.29	-1.84	1.83	.32	-2.12	1.79	.24
Suburban department	-4.60	2.25	.04	-4.65	2.24	.04	-4.81	2.21	.03
Urban department	0.25	3.65	.95	-0.00	3.65	1.00	-0.11	3.62	.98
Female	-7.06	2.39	.004	-7.86	2.37	.001	-7.63	2.34	.001
Minority	-5.28	3.28	.11	-4.63	3.23	.15	-4.84	3.15	.13
Married	-1.82	2.34	.44	-1.90	2.34	.42	-1.86	2.29	.42
Children	-2.38	2.33	.31	-2.53	2.34	.28	-2.60	2.31	.26
Family legacy	-1.49	1.95	.45	-1.47	1.93	.45	-1.18	1.89	.53
Employed as firefighter	0.77	2.14	.72	1.41	2.15	.51	1.45	2.15	.50
Intermittent volunteer	-3.39	2.61	.20	-3.45	2.61	.19	-3.13	2.57	.23
Member other civic group(s)	-2.17	1.84	.24	-2.33	1.82	.20	-1.60	1.81	.38
Experienced close call	1.74	2.43	.47	2.54	2.46	.30	1.99	2.35	.40
Witnessed close call	0.84	2.18	.70	0.26	2.16	.91	0.68	2.14	.75
Equipment in vehicle	4.45	2.01	.03	4.10	2.01	.04	4.16	1.98	.04
Equipment provided by dept.	-1.71	2.61	.51	-1.23	2.62	.64	-1.63	2.57	.53
Observations		217			217			217	
Adjusted R <sup>2</sup>		.29			.30			.32	

Note: Regression results from representative sample with oversample for non-white male firefighters. Estimation weighted according to the population demographics. Probabilities represent two-tailed tests.

Control Variable	<u>Versus Motive Import</u>			<u>Versus Expectation Import</u>			<u>Relative Motive</u>			<u>Relative Expectation</u>		
	$\beta$	(s.e.)	$\rho$	$\beta$	(s.e.)	$\rho$	$\beta$	(s.e.)	$\rho$	$\beta$	(s.e.)	$\rho$
Aggregate Satisfaction	0.16	0.07	.02	0.17	0.07	.02	0.13	0.08	.10	0.10	0.10	.33
Age 18-29 * YOS	1.24	0.40	.002	1.24	0.40	.002	1.28	0.40	.002	1.25	0.37	.001
Age 30-43 * YOS	0.20	0.16	.21	0.19	0.16	.22	0.24	0.15	.12	0.21	0.15	.17
Age 44-57 * YOS	-0.18	0.10	.06	-0.18	0.10	.07	-0.21	0.09	.03	-0.21	0.09	.02
Age 58-100 * YOS	-0.35	0.09	<.001	-0.35	0.09	<.001	-0.32	0.10	.001	-0.32	0.10	.001
Mostly volunteer	-2.41	1.77	.18	-2.38	1.77	.18	-2.06	1.78	.25	-1.99	1.79	.27
Suburban department	-4.35	2.20	.05	-4.36	2.20	.05	-2.62	2.01	.19	-2.63	2.02	.20
Urban department	0.34	3.58	.92	0.30	3.58	.93	1.53	3.28	.64	1.23	3.28	.71
Employed as firefighter	1.21	2.08	.56	1.22	2.08	.56	1.12	1.96	.57	1.12	1.97	.57
Intermittent volunteer	-2.75	2.54	.28	-2.77	2.54	.28	-3.11	2.40	.20	-3.18	2.41	.19
Female	-7.21	2.32	.002	-7.18	2.32	.002	-6.35	1.87	.001	-6.33	1.88	.001
Minority	-5.01	3.13	.11	-5.00	3.13	.11	-2.10	2.40	.44	-2.15	2.72	.43
Married	-1.90	2.30	.41	-1.85	2.30	.42	-2.28	2.16	.29	-3.18	2.16	.24
Children	-2.74	2.31	.24	-2.76	2.31	.23	-1.17	2.18	.59	-.90	2.18	.68
Family legacy	-0.17	1.79	.92	-0.13	1.80	.95	-0.47	1.63	.77	-0.52	1.65	.75
Member other civic group(s)	-1.88	1.81	.30	-1.89	1.81	.30	-1.42	1.66	.39	-1.38	1.69	.42
Experienced close call	0.99	2.33	.67	1.02	2.33	.66	-.01	2.31	.99	.28	2.31	.90
Witnessed close call	1.14	2.14	.60	1.15	2.14	.59	1.59	2.10	.45	1.49	2.12	.48
Equipment in vehicle	4.39	1.97	.03	4.43	1.97	.03	5.81	1.91	.003	5.74	1.91	.003
Equipment provided	-1.91	2.57	.46	-1.92	2.57	.46	-3.76	2.54	.14	-3.76	2.57	.15
Observations		217			217			217			217	
Adjusted R <sup>2</sup>		.31			.31			.28			.28	

Note: Regression results from representative sample with oversample for non-white male firefighters. Estimation weighted according to the population demographics. Probabilities represent two-tailed tests.

## CHAPTER VII

### CONCLUSIONS AND RECOMMENDATIONS

#### **The Problem**

The fire service represents an emergency service of paramount importance and one on which every citizen depends. Of the over one million firefighters in the United States, more than two-thirds are volunteer firefighters and this presents a critical challenge to suburban and rural communities. While the United States' population has increased by 32% and the volume of emergencies has increased tremendously, the actual number of volunteer firefighters has declined by over 10% in the last 30 years. Not only do these volunteers protect the majority of areas across the nation, but they also save taxpayers over \$100 billion annually. The decline in the numbers of volunteer firefighters represents both a potential fiscal crisis and an emergent threat to the safety of those who rely on volunteer fire departments. Going forward, research must inform fire service leaders so that they might slow, arrest, and if possible, reverse this ominous trend.

#### *The Questions*

A better understanding of the aspects of recruitment and retention is essential to increasing the available numbers of volunteer firefighters. While the current rosters of volunteer firefighters are already insufficient to sustain the fire service, the process of attracting new volunteers into the fire service is also problematic if recruits do not remain engaged in service. Thus, it was necessary to study both the motives to join the volunteer fire service and the expectations to continue serving. It was hypothesized that motives were naïve and uninformed and expectations

could be widely different. Plainly, what brings a volunteer to service may not be what keeps them serving. This research then examined satisfaction as a function of having one's fully informed expectations met. In the absence of having expectations met and subsequently receiving satisfaction, one can assume that a volunteer will disengage from service. Therefore, this research analyzed how well the fire service is meeting these expectations, and by extension, satisfying its volunteers. The research questions established are:

1. What *motives* exist for those to join the volunteer firefighting service?
2. How do these *motives* alter and map to *expectations* for continued service?
3. How well are volunteer departments meeting these different *expectations*?

### *Research Design*

Like all meaningful research, this study continued the work of others. This insured that this research made an important contribution to the overall study of the volunteer fire service. Existing research on volunteers is largely generic in nature and studies on volunteer firefighters generally examine department level units of analysis with a focus on successful recruitment and/or retention programs. This research is unique as it utilizes the volunteer firefighter as its unit of analysis. Access to volunteers nationwide is not possible as there is no aggregated roster information and estimates of numbers of volunteers are unreliable. Therefore, the population of my study was the South Carolina Volunteer Fire Service. To answer the research questions, I adopted a mixed methods research design. This approach appeals to both naturalists/interpretive constructionists, who believe in multiple perceptions of reality, and positivists, who believe in one objective and measurable reality. Due to the generic nature of extant literature on volunteering, qualitative methods identified a wide breadth of factors involved. These qualitative methods utilized interviews and concept mapping exercises and a snowball sample to establish these factors. This study then utilized quantitative methods, to evaluate survey responses from a random, representative sample, to leverage generalizable inferences. The literature review revealed that Clary, et al. (1998) established the following six generalized motives for



volunteering: 1) values; 2) understanding; 3) career; 4) social; 5) protective; and 6) enhancement. These typologies are, of course, not specific to the fire service, but are rather motives to volunteer in general. Therefore, the qualitative analysis was designed to reveal which of the six motives and expectations exist within South Carolina's volunteer fire service. The results then informed construction of the survey instrument, which permitted quantitative analysis on motives, expectations, satisfaction, and their effects on retention.

### **The Answers**

The qualitative portion of this research informed the quantitative portion of this research. The interviews and concept maps derived from the qualitative methods informed the construction of the survey instrument. In the end, I conducted an analysis of motives, expectations, satisfaction, and retention using both qualitative and quantitative methods and drew conclusions with all available leverage. This allowed me to contrast results, evaluate categories of joiners from both samples, compare reported satisfaction, and establish conclusions.

#### *What Motives exist for those to join the volunteer firefighting service?*

The qualitative motive analysis suggests that *friends/family in service*<sup>10</sup>, *helping others*, and *excitement* responses were the most important motives to join. Of the 22 different individual responses from the snowball sample, these three individual response categories were the most common motives to join in the interviews and resulting concept maps. When coded to the Clary, et al. (1998) framework, these individual responses represent social, values, and enhancement motives to join respectively. Due to the non-probability sampling method and small sample size, these results were not conclusive. Instead, these results really helped me to identify what forms that the Clary, et al. (1998) factors take in terms of volunteer decision-making calculus.

Next, the qualitative research examined the relevant pairs of highly important motives to join in order to establish reasonably distinct categories of joiners. This study ultimately established four categories of joiner archetypes in the forms of: 1) family firefighters; 2) altruists; 3)

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<sup>10</sup> Like chapters 4, 5 and 6, individual responses in this chapter are italicized for easy identification.

excitement/risk junkies; and 4) learners. Family firefighters – those that are legacies or have a family history of volunteering in the fire service – consider social and values motives to join most important. The social influences come from family members who are already serving. The social or family influence to volunteer comes in the form of values motives, specifically *civic responsibility* and *helping others*. For family firefighters, social motives explain how the volunteer is influenced and values motives explain for what purpose.

Altruists consider values and enhancement factors their most highly important pairs of motives to volunteer their time. *Helping others* exists as the primary motive to join while enhancement factors include personal membership and identity tied to *being part of a valued public service*. Excitement/risk junkies, on the other hand, consider enhancement factors most important with values factors a secondary concern within their highly important pairs of motives. Enhancement was represented primarily by the individual responses associated with *excitement* and values with the constant theme from the volunteers of *helping others*.

Finally, learners place understanding and enhancement factors in their highly important pairs of motives to join. *Acquiring/applying new skills* and *obtaining training* represent the understanding motives of higher importance. The benefits derived from these understanding factors come in the form of enhancement factors, primarily *self-improvement*.

The quantitative motive analysis revealed that values and enhancement factors exist in different tiers of importance. Values and enhancement clearly represent the upper most tier of import. Understanding, social, and, to a lesser degree, protective motives emerged in a secondary tier of importance and career motives are found within a tertiary tier of importance. The quantitative motive analysis established that social motives are important to family firefighters, which represented the highest number of respondents in the representative sample; enhancement motives are important to excitement/risk junkies; and understanding motives are important to learners. Values motives, which are of the highest importance to altruists, also exist as an underlying motive in the primary tier of importance for the other three categories of joiners.

Among the control variables, respondents serving suburban/urban areas reported higher importance of enhancement motives to join. Non-traditional respondents (i.e. non-white male volunteer) placed higher importance on values within their motives to join. Unmarried respondents reported higher emphasis on values, understanding, and enhancement motives. Based on the motive analysis results, volunteer firefighters overall consider values and enhancement motives highly important. It is facially valid to conclude that the current recruitment model is insufficient for future needs and has contributed to the decline in the numbers of available volunteer firefighters. To recruit outside of this current model, fire service leaders should consider attracting non-traditional volunteers and/or those outside of the insular group of family firefighters, which represent the largest current category of joiner within the representative sample. The motive analysis suggests that non-traditional volunteers consider values motives of higher importance, so an emphasis on those messages is critical. By also focusing on enhancement and understanding motives and messages, leaders may be best able to recruit outside of the current insular network of traditional family firefighters that have heavy emphasis on social motives in their joining calculus.

*How do these motives alter and map to expectations for continued service?*

The qualitative expectation analysis suggested that *helping others*, a values factor, maintains its position of importance throughout the maturation that takes place with actual service. In addition, *obtaining training/acquiring skills*, *sense of civic responsibility*, *friends/family in service*, and *excitement* all become moderately important expectations to continue service. When coded to the Clary, et al. (1998) factors, the snowball sample suggests that while the importance of values factors did not change from motive to expectation, understanding factors generally became more important as naïve motives transformed into informed expectations. Many respondents suggested that the social factors that led many initially to join actually became less important. Expressions of enhancement factors like *excitement* also tended to diminish during the service stage, but this may have been partly a function of group norms of expressed behavior (i.e., only rookies are in it

for the excitement). Career and protective factors remained of low importance as expectations to continue service according to the snowball sample.

The quantitative results revealed that *helping others, civic responsibility, serving as a role model, obtaining training, fellowship, excitement, being a member of a valued public service, and a feeling of accomplishment* were all highly important expectations to continue service. When coded to the Clary, et al. (1998) framework, values, enhancement, and understanding factors emerge within the primary tier of importance for expectations to continue service. Social and protective factors are found in a secondary tier of importance, while career factors remained of low importance within the third tier of expectations to continue service. While values and enhancement motives did not alter significantly, aspects of understanding motives did so. Understanding factors matured from moderate importance as a motive to join into highly important expectations to continue service. Social, protective, and career factors did not encounter significant motive to expectation drift.

Among the categories of joiners, family firefighters continued to keep social expectations in their primary tier of importance, but values and enhancement expectations matured to a higher importance for family firefighters during the service stage. Understanding expectations increased in importance from their motive counterparts, while protective and career expectations remained relatively unchanged. For altruists, values and enhancement factors remained highly important but were joined by understanding expectations, which increased in importance from their motive counterparts. Excitement/risk junkies continued to keep enhancement and values expectations in their primary tier of importance but also realized a significant increase in the importance of understanding expectations. Learners also continued to have understanding factors as part of their primary tier of importance, joined by values and enhancement expectations. The quantitative results revealed that every category of joiner realized an increase in the importance of understanding expectations, which corresponds to the overall importance alteration of understanding factors when maturing from motives to expectations.

The control variables within the expectation analysis illustrate that in the primary and secondary tier of importance, values and enhancement expectations are more important to non-traditional respondents. Unmarried respondents consider values, understanding and enhancement expectations more important. This is intuitive, as married respondents likely derive significant sources of these factors from their family life. Respondents without children consider enhancement expectations more important. Those with 19 years of service and less place higher importance on understanding expectations and those without full-time employment in the fire service reported a higher importance for values expectations.

Overall, this research determined that values and enhancement motives do alter with service. They remain within a primary tier of importance for continued service but are assessed greater import with exposure and participation within the service. Understanding motives also mature and evince a marked increase in importance. The need to understand becomes part of the primary tier of importance. Social and protective motives show some small incremental increases, but remain in the secondary tier of importance overall. Career motives also increased in importance but are clearly the least important expectations and exist in a clearly defined tertiary tier of importance. Given that the most pronounced motive to expectation drift is among understanding motives, these should be a focus of fire service leaders during retention. This is in addition to emphasis on fulfilling volunteers' values and enhancement expectations. However, the lower importance found for respondents with greater than 19 years of service suggests that emphasizing understanding factors to volunteers is time sensitive. As a volunteer gains years of service, the importance of understanding factors fades.

*How well are volunteer departments meeting these different expectations?*

To answer this research question, this study evaluated satisfaction as a function of having respondents' expectations met. The qualitative results revealed that *helping others*, *civic responsibility* and *obtaining skills/training* were highly satisfying among the snowball respondents. When all of the individual snowball responses were coded to the Clary, et al. (1998)

scheme, values and understanding factors were highly satisfying, enhancement and social factors were moderately satisfying, while protective and career factors provided low satisfaction.

The quantitative results determined that *helping others, civic responsibility, obtaining training, fellowship, excitement, being part of a valued public service, and a feeling of accomplishment* were all highly satisfying. When coded to the six generalized factors, then, values, enhancement, and understanding exists in the primary tier of satisfaction, followed by social and protective factors in the secondary tier of satisfaction. Career factors were in the tertiary tier of satisfaction. These satisfaction results are consistent with respect to expressed importance of expectations to continue service. This answers the third research question and illustrates that departments are doing well overall and are typically meeting current volunteer firefighters' expectations.

The satisfaction results, when separated by control variable, demonstrate that several important variances do exist however. Non-traditional volunteers reported higher satisfaction from enhancement factors. Given that values factors were more satisfying to non-traditional respondents, this may be a dual-fold opportunity for improvement of retention. A one-two punch of emphasizing values and enhancement factors seems most appropriate for those seeking to diversify their department rosters. Like the expectation analysis, unmarried respondents reported higher satisfaction from values, understanding, and enhancement factors and respondents without children reported higher satisfaction from enhancement factors. Respondents with 19 years of service or less derive higher satisfaction from values and understanding categories. Finally, values, understanding, and enhancement factors were more satisfying to respondents without full-time employment in the fire service. This suggests that volunteer firefighters with full-time employment in the fire service may be volunteering for social reasons.

#### *Results of the Retention Analysis*

This research also answers the effects that satisfaction, and other factors, has on retention and service length. Using satisfaction to predict future service commitment produced some interesting results. The service commitment is in fact a fairly simple decision-making calculus.

A strong anchor point located at the joining stage does not exist. The satisfaction of naïve motives to join does not yield significant relationships with prospective service expectations. Instead, naïve motives yield to informed expectations which, when met, provide the volunteer satisfaction. However, exceeding those expectations does not appear to make volunteers more willing to serve. Instead, the calculus is bluntly simple. If they consider themselves satisfied on certain factors, volunteers will remain engaged in service. Interestingly, this may not be completely tied to their current informed expectations either. One satisfaction category – values factors – dominates all others and produces a significant increase in service length. Enhancement factors do show some borderline strength, and likewise would act to increase service periods. Simply put, leaders seeking to shore up and expand department rosters must transmit clear signals and design experiences that show firefighters that their service is fulfilling these critical categories of needs. Volunteer firefighters must be picking up cues and indications that their service truly *helps others*, that it helps fulfill their *civic responsibilities*. It is also important that these values stimuli tend to activate a sense of *individual accomplishment* and that volunteers' commitments are, in the end, of benefit to a *valued public service*. Of course, department leaders cannot control public perceptions and what citizens perceive as valued service. They can, however, be strategic about how their communities express their appreciation to the volunteers of the department. It is likely that a little community effort and recognition will go a long way toward retention of trained volunteers. For example, the department could recognize the volunteer for service milestones or achieving specified levels of training. It also has the added benefit of encouraging recruitment activities as well. On the other hand, understanding factors have a more marginal negative relationship. The reduction in service length associated with understanding factors is likely due to those learners identified that pick up what they can and then disengage from the service to seek out new experiences. Alternatively, the fire service may not be doing a good enough job at helping them learn. Given the large number of hours and commitment required for learning tasks in the fire service, the latter may be more likely. It is

important that department leaders do what they can to keep these types of learner volunteers within the firehouse. They might be satisfied by offering more systematic training opportunities and recognizable certification levels and ladders of progress. Those volunteers motivated by understanding goals are likely to be critical in terms of leadership and coordination, so in some ways these factors are just as important as the values and enhancement efforts.

Social factors were not significant with respects to retention or service length. This is important for fire service leaders that believe more cookouts and dinners will help retention of volunteers. The representative data suggest that this is more than likely not the case. People have a finite amount of time to dedicate to volunteer service. These results suggest that using the volunteer's available time to promote their values, provide personal enhancement, or encourage understanding is more important to retention than simply providing opportunities to socialize. However, to the extent that those activities reinforce the values, enhancement, and understanding goals they could be very important to retention.

Career factors are largely unimportant and unsatisfying overall. However, career expectations are more important and satisfying among volunteers serving suburban/urban populations.

Suburban/urban communities are more likely to have the resources to offer career factors such as *gaining full-time employment in the fire service, networking with community and business leaders, and supplemental income*. In rural areas, these factors are often not available, which explains the lower importance and satisfaction among that subset of volunteers. The negative estimate associated with the suburban variable in the regression analysis could signal volunteers that are becoming successful at obtaining full-time employment in the fire service, and thus ending their volunteer service. Areas where these career factors are available usually have higher call volumes and are more likely to utilize career/paid personnel to meet the increased call volumes and provide additional services. A volunteer in an area such as this may not be able to attend even half of the calls for service the department experiences and may find it extremely difficult to gain the knowledge and skills necessary to participate in all of the services the



department provides. In this case, or in cases where paid/career personnel are responsible for more department activities (i.e., checking equipment, driving apparatus to emergencies, managing administrative functions), departments have a significantly harder time making volunteers feel as if they are truly *helping others*. The decline in the numbers of volunteers in areas such as this may relate more to the department's inability to provide satisfaction related to these values factors and not necessarily relate to these career factors. When considering the final career factor, *supplemental income*, this research demonstrates a lack of value. In their research, Tang, Morrow-Howell, and Choi (2010) suggest that 93% of volunteers are less likely to withdraw from the program if they receive a financial stipend. However, my research demonstrates that supplemental income is the least important motive to join and expectation to continue serving, and yielded the lowest level of satisfaction among all responses. This is important as many departments establish programs that provide their volunteers monetary rewards such as retirement, mileage reimbursements or pay-per-call stipends. Like the qualitative results revealed, volunteers appreciate the remuneration, but the research conclusions suggest it is, by far, the least important to their recruitment and retention. *Supplemental income*, along with other career factors, also has no statistically significant effect on service length. Fire service leaders that struggle to identify which type of remuneration program is appropriate for their department should refine their focus to more important factors, such as values, enhancement, and continually coming up with understanding opportunities.

These results also illustrate large differentials for gender and race. Females experience a substantial decrease in prospective service length that could be related to biological explanations such as child rearing or could be related to the social context. Minorities also experience a decrease in service length (to a lesser degree and with marginal significance) suggesting that it is more likely to be department social context. This demonstrates that the volunteer fire service is failing to recruit outside of the traditional (white male) pool and then failing to keep these recruits when they do. Approximately half of the United States' population is female and approximately

one-third of the United States' population is a racial minority. The largest category of joiner found in this representative sample of South Carolina departments was family firefighters. If we continue to target the existing pool of volunteers that are (white male) legacy recruits, then there is no real means to meet the future demand for volunteers.

Interestingly, the presence of equipment (warning light, siren, and radio) produced a sizeable increase in retention. While the results show that values factors are highly important to satisfaction and retention, enhancement factors are also important. This equipment is simply a symbol of the convergence and correlation of altruism and self-interest as outlined by Rogers (1951) and Maslow (1950). While public service is important, so is self-improvement. While volunteers want to feel as if they are helping others, they want to gain something out of service personally as well. The value placed upon this equipment is often about branding and recognition. In a way, it simply meets the dominant values and enhancement factors. Equipment enables a volunteer to *help others* better by responding in their personal vehicle to emergencies in lieu of having to be at the fire station when a call for service occurs. Volunteers also gain *excitement* through the ability to respond to emergencies at any time and this equipment answers the question of the volunteer's identity, by serving as a symbol of the volunteer *being a part of a valued public service*, both of which are enhancement responses.

Overall, the results demonstrate that the fire service is doing well at meeting current volunteer expectations. Nevertheless, the current situation is untenable as the numbers of volunteer firefighters nationwide continue to decline. This research established results that can help to change this decline. The future of volunteer firefighters is at risk and requires a full understanding of the big picture.

### **The Big Picture**

First, this research has determined that there is a lack of long-term connection of service length with initial motives to join. This means that members are becoming volunteer firefighters with naïve motives to join. Their expectations develop and mature during service. For the fire service,

this means that there are no limitations on recruiting. Much like the military, recruiting can vary widely from volunteer to volunteer. This is not a liability for fire service leaders; rather it is an asset. It does not matter by what means fire service leaders pull potential volunteers into the queue. Volunteers should be recruited, appealing to whatever motive is important to them, and their expectations will eventually sort out, mature, and align with the dominant expectations to continue service – values, enhancement, and understanding factors. This supports the position of Moore, Warta, and Erichsen (2014) who suggest that values and new learning experiences are the strongest influences on potential volunteers. Those new learning experiences reinforce a volunteer's position as *a member of a valued public service* and create *self-improvement*. Nevertheless, volunteers with strong values and enhancement motives are the candidates that are most likely to commit to service. Altruists and excitement/risk junkies are the categories of joiners most likely to consider these factors most important at the recruitment stage. Family firefighters, although primarily influenced by social factors, also place values and enhancement factors in their highest tier of importance and are a prime example of the delimited recruitment method. While *friends/family in service* may be the primary influence on a volunteer joining, the values and enhancement factors will ultimately serve as the influence on the volunteers continued service. However, these family firefighters are the bulk of the current recruitment pool, as is evident by them representing the largest category of joiner in this research. In order to reverse the decline in the numbers of volunteer firefighters, fire service leaders must recruit outside of this current pool. In this instance, learners appear to be a potentially untapped pool. Although these results suggest that they may have shorter service lengths, it is possible that this relationship is mostly due to departments failing to challenge them. The future requires a bigger pool of volunteers and learners are a supplemental staffing resource that must be cultivated. Full-service, all-hazards departments that provide a wide range of fire-rescue and emergency services are the best opportunity for learners. These departments can offer training on an almost unlimited number of tasks and tactics. Learners can potentially learn about training and skills from fire

suppression, investigation, inspections to advanced life support pre-hospital medicine and from technical rescue to hazardous materials and weapons of mass destruction mitigation. This could be very attractive to learner type volunteers. Departments should establish and clearly delineate paths to mastery for the various services offered by the department. It is essential to meet these understanding expectations, as this is how the fire service can also increase satisfaction on values factors. *Excitement* and *being part of a valued public service* are enhancement factors and will only satisfy volunteers to a limited level. Volunteers quickly learn that not having the training and skills to perform on the scene will leave them feeling as if they are not *helping others*. Along those lines, then, understanding factors can be the key to improving satisfaction on values factors too. This requires that fire service leaders take a hard look at what their departments are doing. My own department responded to 7,676 calls for service in 2015 with 5,279 of these being medical responses. Only 84 of these calls to service were structure fires. While “fire” is in the name of volunteer fire departments, unless volunteers have a high level of medical training (i.e., Paramedic), they cannot help with the vast majority of the calls that the department handles. The Fire Department of New York (FDNY) has the largest call volume of any fire department in the United States. In 2015, FDNY responded to 1.67 million medical incidents and a mere 66,521 fire related incidents (New York City Fire Department 2016). Fire service leaders should refine the focus of the understanding factors provided to volunteer firefighters based on the types of incidents the department handles. Consider, for example, what happens to a volunteer who responds to an ambulance call versus a volunteer that responds to a house fire. If the volunteer does not respond to the ambulance call, the ambulance will still respond and handle the call without the assistance of the volunteer. In the house fire scenario, in many cases, the department cannot effectively handle the emergency without help from its volunteers. In the ambulance call example, which represents the large bulk of the call volume in all-hazards departments, the volunteer is not needed on these types of emergencies. This ultimately threatens their satisfaction associated with *helping others* and *civic responsibility*, since these emergencies are handled with

or without the help of the volunteer. In the house fire example, which represents a small fraction of the overall call volume, volunteers believe they are *helping others* and have their feeling of *civic responsibility* increased by virtue of the department's dependence on their participation. Unfortunately, in all-hazards departments levels of satisfaction are marginalized by the high frequency of emergencies for which the department does not need the volunteer's participation. Another more simple way of increasing satisfaction from values factors is by insuring that department leaders tell volunteers that they are *helping others* and that it is their *civic responsibility* to serve the community. In departments that also utilize paid/career personnel, leaders should stress to volunteers that their participation is still necessary. Plainly, fire service leaders must tell their volunteers that what they do makes a difference for the citizenry and the department needs their continued participation, despite the presence of paid/career staffing. Like the paid/career fire service, the volunteer fire service struggles with a lack of diversity. The volunteer fire service could benefit by recruiting females and minorities based on providing career and enhancement factors, which non-traditional respondents found more important and more satisfying during the service stage. Females and minorities may possess desires related to understanding factors outside of the traditional firefighting training. For example, single mothers may have a higher risk aversion and desire to obtain medical training in lieu of fire training. Given the high number of medical responses, recruiting females and minorities to train and operate specifically at these types of incidents may help to increase the pool. In departments that require volunteers to have training in both fire and medical training, it may improve recruitment and retention by specifying that the number of medical incidents that occur far exceed the number of fire related incidents.

Improving satisfaction on enhancement factors is necessary. Fire service leaders can accomplish part of this improvement through offering effective understanding factors. By providing training and skills to volunteers, they will experience satisfaction through *self-improvement*, an important enhancement expectation. The fire service should also recognize the importance of *excitement*.

While it is necessary that firefighters calmly and purposefully execute tasks during an emergency, *excitement* is important to many volunteer firefighters. Fire service leaders must understand that rejecting *excitement* may result in a dissatisfied volunteer, resulting in disengagement from service. This suggests that the fire service needs a delicate balance of the promotion and suppression of *excitement*. Finally, for departments that prohibit the use of equipment (warning lights, siren, and radio) in a volunteer's personal vehicle, they should recognize the powerful positive effects of equipment demonstrated by this research. Equipment appeals to both enhancement and values factors among volunteers and had a statistically significant and positive effect on retention.

### *Practical Implications*

My role as both a researcher and practitioner affords me a unique perspective on the issue of declining numbers of volunteers. In past decades, the fire service has adopted new services in an effort to stay relevant, as the number of building fires annually has declined. This decline in the number of building fires is deceiving because of the changing dynamics of fires. Decades ago, fires involved naturally constructed contents (e.g. wood and cotton) under buildings constructed using hardwood and nails. Building fires today involve synthetic materials (e.g. polyethylene, polystyrene, and polyurethane) under buildings with lightweight, energy efficient construction that now use glue instead of nails. The result is that modern contents have higher heat release rates under modern buildings that hold heat better and fail more quickly. In the absence of pre-engineered suppression systems, fires in buildings built today and in the future will require more personnel to arrive at the scene much more quickly than in the past. As previously demonstrated, building fires, although high risk, have become very low frequency in the overall call volumes of almost every department. As with the other services for which the fire service is responsible, high risk, low frequency calls to service require training to the mastery level.

However, fire service leaders have responded in an opposite manner to this dilemma. As the training requirements for structural firefighting have increased in the last decade or two, many

leaders have concluded that the commitment is too much for a volunteer. These leaders argue that the department cannot force volunteers to do anything. This would be understandable if the service in question was not performing tasks during which responders can be injured or killed. Many departments have relaxed their training and participation requirements in an effort to keep volunteers engaged, but this may have the opposite of the desired effect. When a volunteer joins, they essentially begin by wandering aimlessly about the organization. With limited performance requirements, it is not their *civic responsibility* to participate. Instead, the department simply asks them to participate if they can. If they lack the basic level of training, they may experience the *excitement* of response to emergencies, but as they again wander around aimlessly at the emergency scene while properly trained volunteers save lives, stabilize the incident, and conserve property, they likely cannot experience satisfaction from *helping others* or a *feeling of accomplishment*. This is even more prevalent when departments utilize paid/career and volunteer personnel. Because of their limited and inconsequential participation, they may feel as if they are *not being a member of a valued public service*, especially when compared to properly trained volunteers or paid/career personnel. Additionally, where departments have two different training requirements, one for paid/career personnel and one for volunteers, this has a high probability of negatively effecting *fellowship* and the satisfaction derived from *obtaining training*. In cases such as this, the friction created between paid/career personnel and volunteers can increase exponentially by building a greater divide between the groups that the public expects to function seamlessly, side-by-side during emergencies. Training a volunteer to perform at a basic level that is consistent with the other personnel in the organization is paramount. This training is the key to volunteers accessing all of these highly important and satisfying responses. Without properly training volunteers, as described above, they are only likely to realize satisfaction from *excitement*, which is the least satisfying of the individual responses in the top tier of satisfaction and the response that is most likely to be suppressed by established members. In this process of training volunteers, it is important to demonstrate the importance of how the knowledge gained

can both help others and improve the volunteer. This approach appeals to values, enhancement, and understanding factors, which are dominant among all expectations to continue service and improves satisfaction, which should improve retention of volunteers. Fire service leaders cannot continue to have limited to no performance requirements for their volunteers and then complain that their volunteers provide their departments limited to no performance. Training keeps the volunteer engaged and while existing volunteers would likely resist changes or increases in training and participation requirements, this research is concerned with retention beyond the current staffs and considers the future of the volunteer fire service.

#### *Suggestions for Future Research*

Ideally, a national survey of volunteer firefighters using this study as a foundation would be the best application of this research. However, this research opted to use volunteer firefighters in the state of South Carolina as its population of study because sampling the national pool of volunteer firefighters is extremely difficult. Random sampling of volunteer departments is much more feasible than random sampling of volunteer firefighters nationally because there is no national database for volunteers. This study demonstrated that even state databases for volunteers might be inaccurate.

Another research option would be to repeat the qualitative portion of this research among focus groups. Technology now exists to improve the reliability of focus group responses by capturing all responses from large groups, which enables researchers to record individual responses as opposed to only identifying the majority opinion of the focus group. Almost everyone carries a smartphone now, which respondents can use to transmit survey responses from focus groups. This has the potential to improve the results that focus groups can yield and would improve reliability and generalizability of the results.

A longitudinal research design is another option to further this research. A study such as this could involve measuring a group of volunteers when they join and five to ten years from joining, and might provide better results. This would enable researchers to track how motives and



expectations change among specific volunteer firefighters. The disadvantage to this approach would be that it would most likely involve a smaller sample and results with lower generalizability.

Another research option would be to perform a cross-sectional analysis on volunteers that have separated from the fire service. The purpose of that research would be to determine their reasons for disengaging from service. The study could identify what was important to them and what was satisfying to them. Research such as this could also identify whether dissatisfaction led to their separation or if it was due to another factor, such as personal time constraints or family influences.

Finally, researchers could repeat this study in other geographic areas of the country. Because the population of study was limited to volunteer firefighters in the state of South Carolina, there are inherent limits on its external reliability. If researchers repeat this study in other states (e.g. Oregon, California, Maine, Nebraska, Montana, and Arizona) with similar outcomes, it would improve the overall generalizability of these results. Nevertheless, the results of this research come from a state that is representative of the overall fire service. South Carolina is experiencing a decline in the numbers of volunteer firefighters that is similar to the remainder of the country. Although the results are not necessarily generalizable to the entire country, fire service leaders across the United States should consider how these results might improve recruitment and retention in their own departments.

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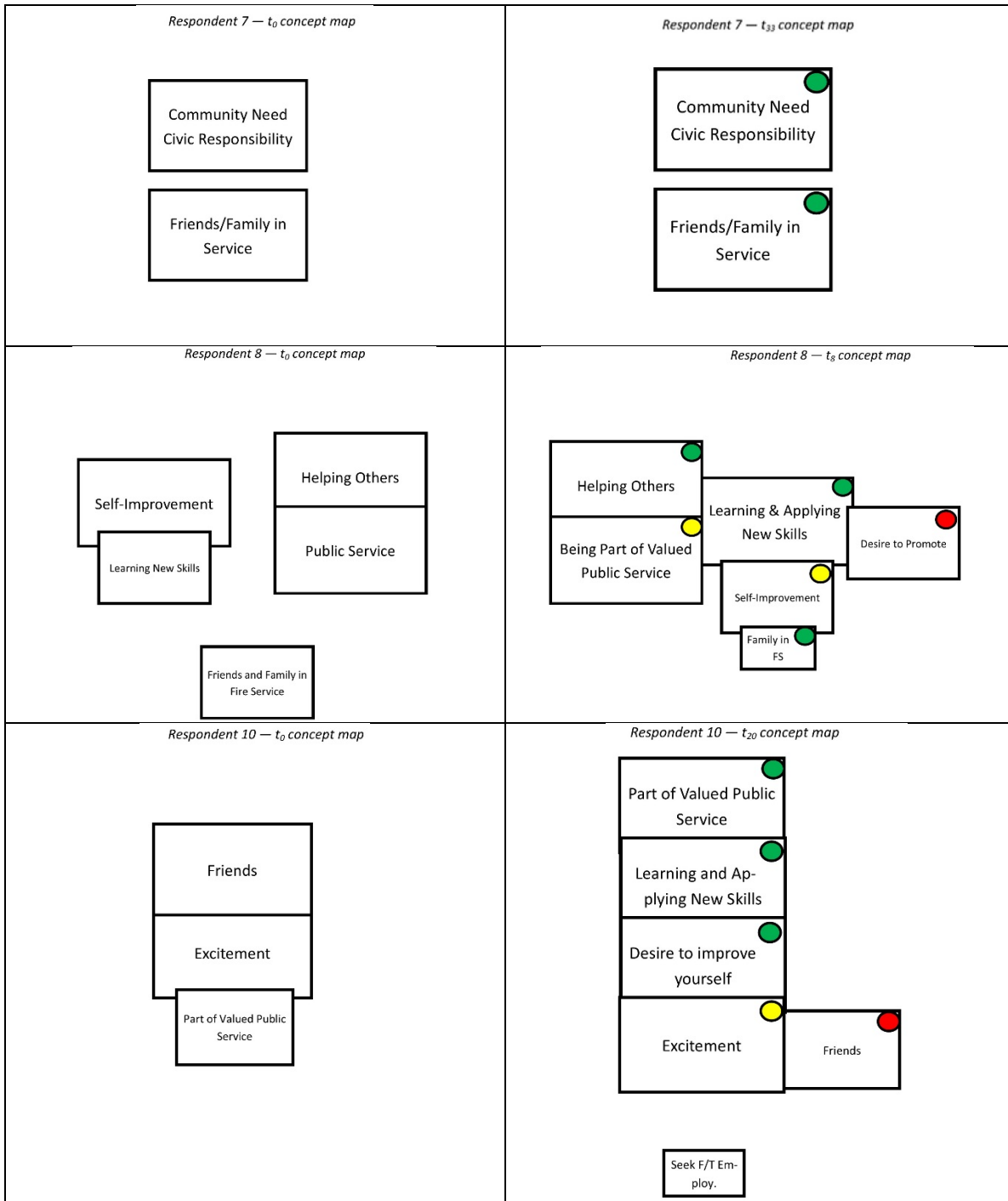
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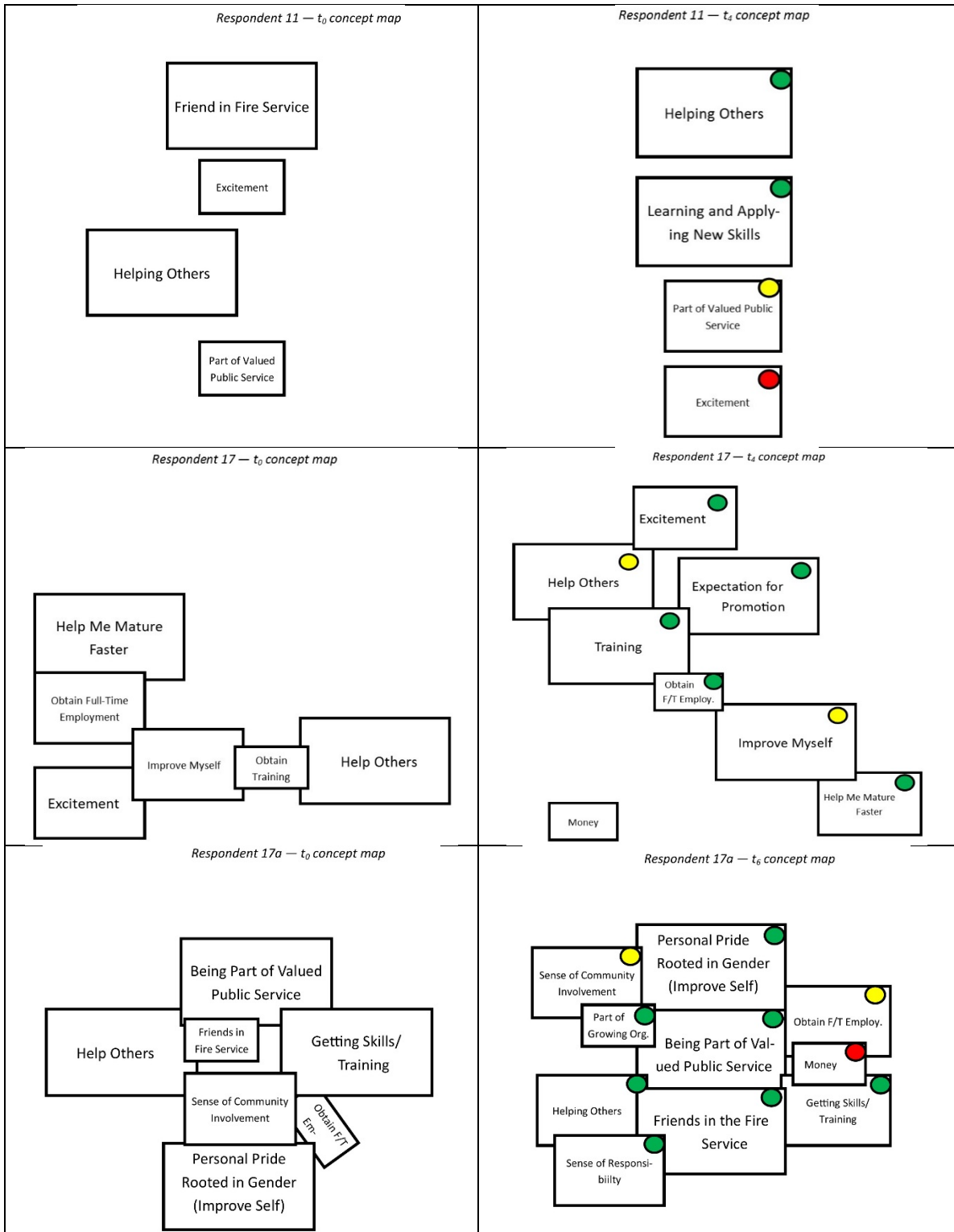
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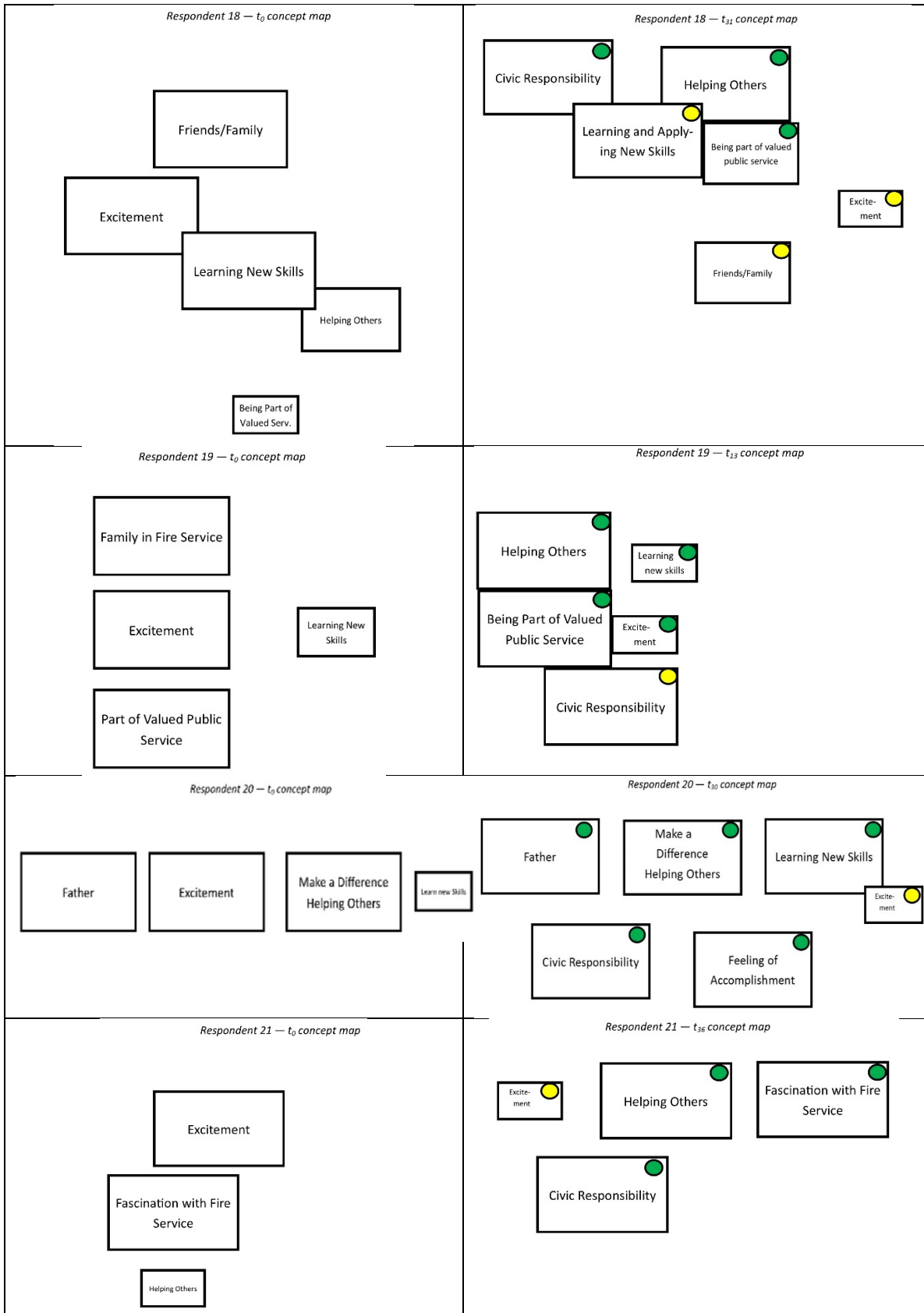
APPENDICES


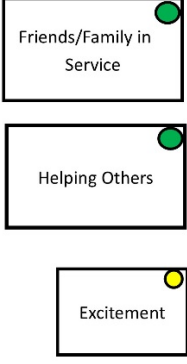
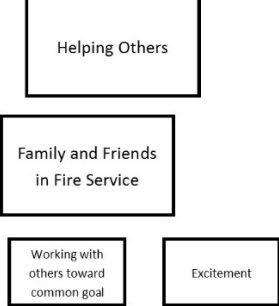
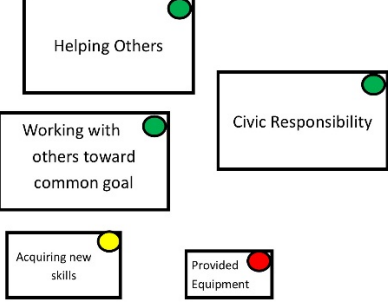
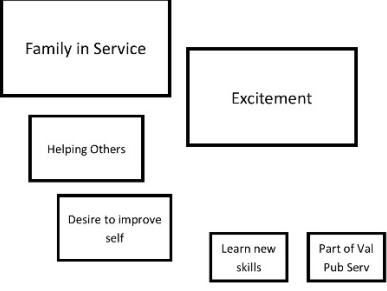
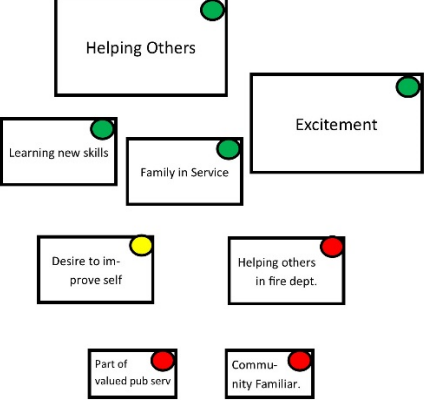
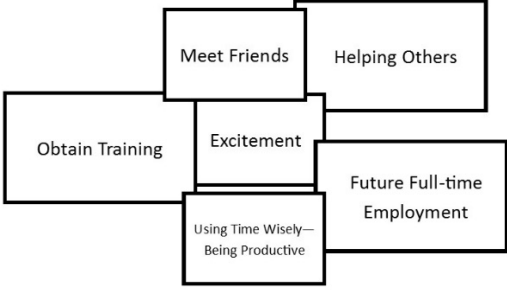
APPENDIX A – QUALITATIVE CONCEPT MAPS

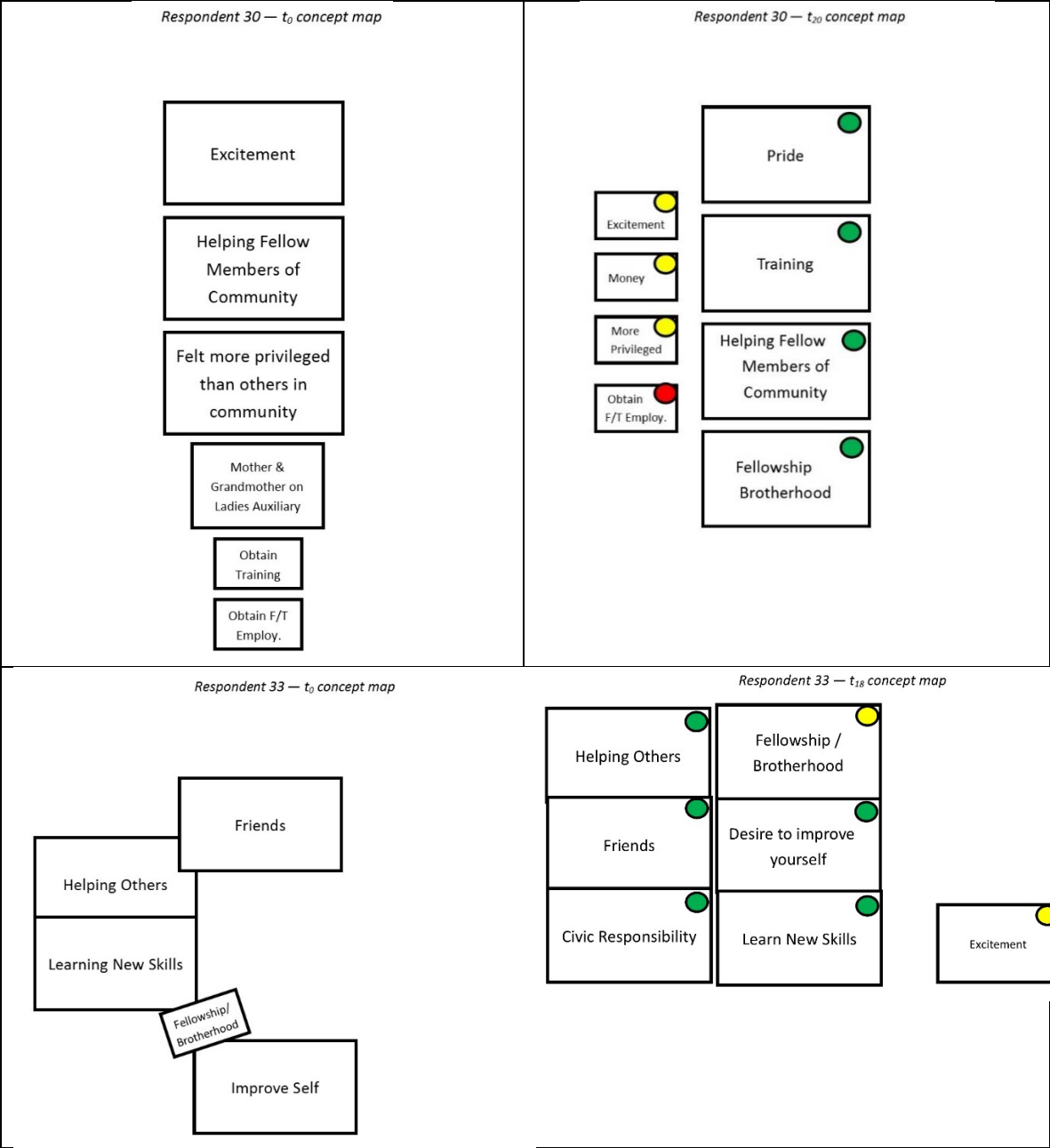
<p><i>Respondent 1 – t<sub>0</sub> concept map</i></p>	<p>Respondent 1 did not have more than two years of service and therefore did not complete a concept map for expectations to continue service.</p>
<p><i>Respondent 6 – t<sub>0</sub> concept map</i></p>	<p><i>Respondent 6 – t<sub>1</sub> concept map</i></p>



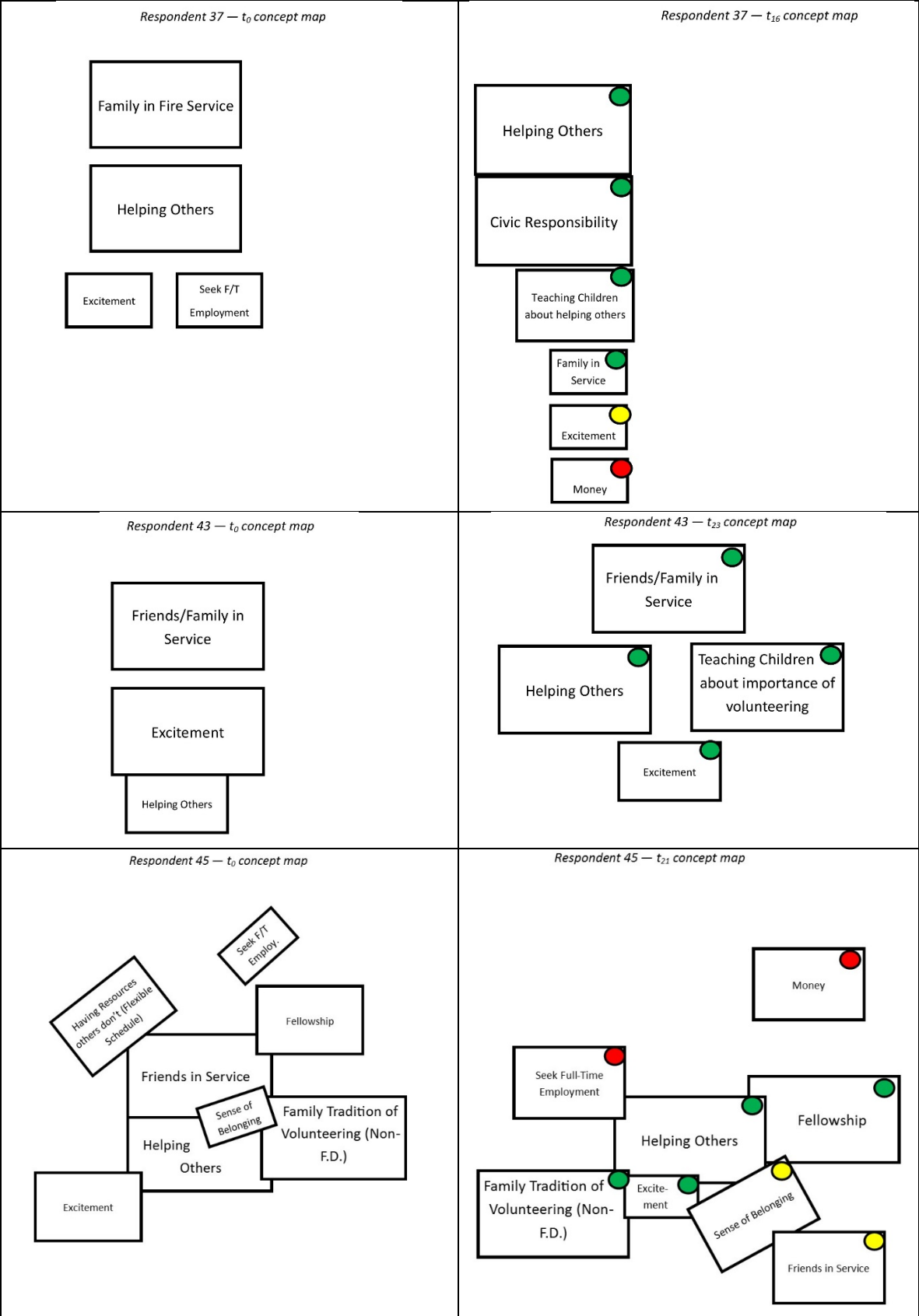


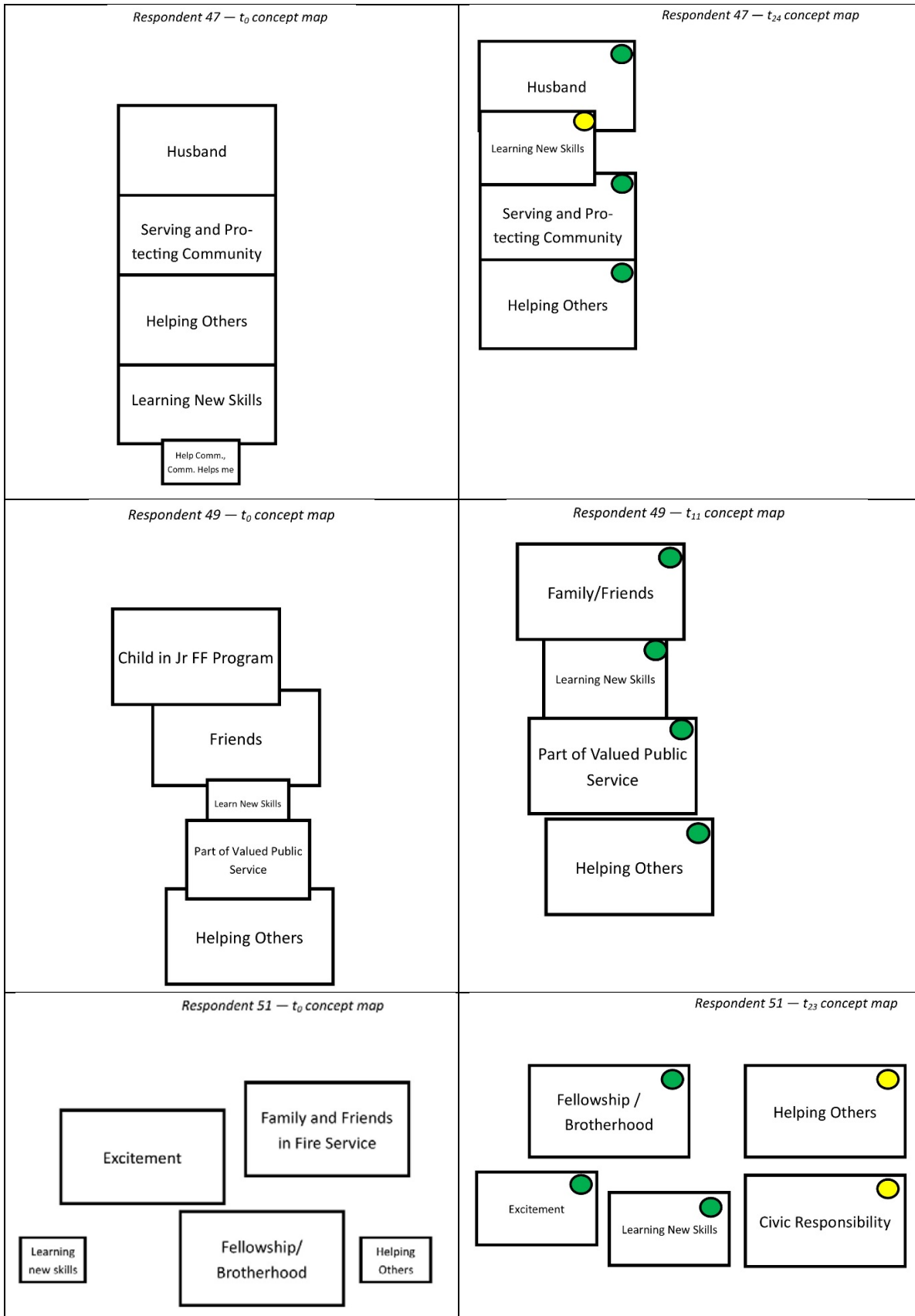


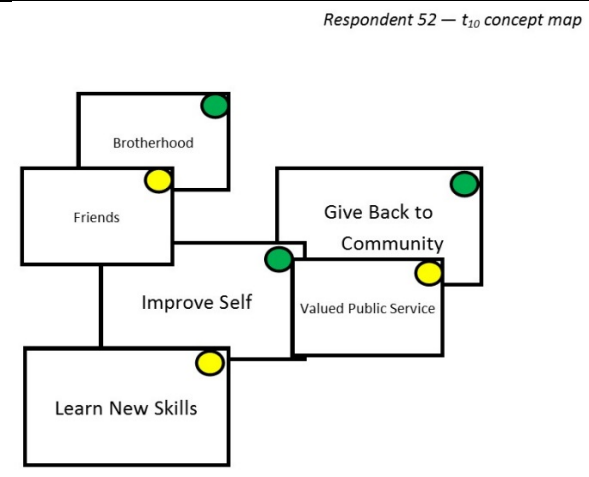
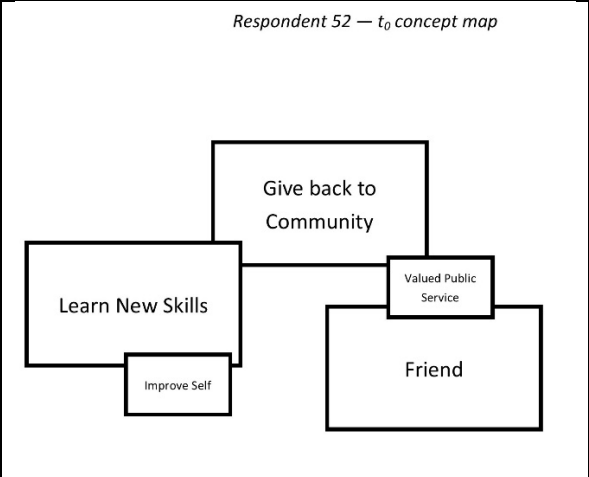
<p><i>Respondent 21a — t<sub>0</sub> concept map</i></p> 	<p><i>Respondent 21a — t<sub>23</sub> concept map</i></p> 
<p><i>Respondent 22 — t<sub>0</sub> concept map</i></p> 	<p><i>Respondent 22 — t<sub>10</sub> concept map</i></p> 
<p><i>Respondent 24 — t<sub>0</sub> concept map</i></p> 	<p><i>Respondent 24 — t<sub>7</sub> concept map</i></p> 
<p><i>Respondent 29 — t<sub>0</sub> concept map</i></p> 	<p>Respondent 29 did not have more than two years of service and therefore did not complete a concept map for expectations to continue service.</p>











## **APPENDIX B – RESEARCH ANNOUNCEMENT**

### **The South Carolina Fire Service needs the help of your volunteer firefighters!**

Oklahoma State University is conducting research on the motives, expectations and satisfaction of volunteer firefighters in the state of South Carolina. You are receiving this announcement because your department was identified as using either mostly volunteer firefighters or all volunteer firefighters for staffing.

Participation in this research is limited to volunteer firefighters who are 18 years of age or older and are members of fire departments that are served wholly or mostly by volunteer firefighters. The research involves a simple online survey that should only take 15 to 20 minutes to complete. Because the survey distribution requires a random sample, individuals in your department will be randomly selected to participate. Instructions on which individuals in your department should be given the link to complete the survey are attached.

This research will aid others in understanding the motives, expectations and satisfaction of volunteer firefighters. It is hoped that a better understanding of these motives, expectations, and satisfaction can lead to improvement of volunteer firefighter recruitment and retention programs.

Make sure your department's voice is heard! Please see the attached research consent form.

While completion of this survey is voluntary, the results will be essential to improving the understanding of recruitment and retention within the volunteer fire service.

Please direct any questions to:

David A. Greene, Oklahoma State University, PhD Candidate, Primary Investigator  
113 Mable T. Willis Blvd.  
Walterboro, SC 29488  
(843) 908-9161  
[dgreene@colletoncounty.org](mailto:dgreene@colletoncounty.org)

## APPENDIX C – QUALITATIVE RESEARCH CONSENT FORM

**Purpose:** Oklahoma State University is conducting a research project that involves researching the motives and satisfaction of volunteer firefighters in South Carolina. The purpose of this research is to identify the most important motives, expectations, and satisfaction with service. Participation is limited to volunteer firefighters who are 18 years of age or older and are members of fire departments that are served wholly or mostly by volunteer firefighters.

**Procedures:** An interview will be conducted along with a concept (motive) map exercise. Both should take approximately 30 to 45 minutes to complete. The data from the survey will be analyzed using qualitative analysis. Photographs of the completed concept map will be taken.

**Risks of Participation:** Subjects may be bothered by the time it takes to complete the survey. There are no known legal risks to participation. There are no known risks associated with this research project which are greater than those ordinarily encountered in daily life.

**Benefits:** This research will aid others in understanding the motives and satisfaction of volunteer firefighters. It is hoped that a better understanding of these motives can lead to improvement of volunteer firefighter recruitment and retention programs.

**Confidentiality:** The data collected will be stored on the investigator's laptop, which is password protected and is accessible only by the investigator. The data will be kept long enough to complete the research associated with this project and any published manuscripts that stem from it. The results will be reported in a dissertation that will be sent to Oklahoma State University and may be shared with University faculty, staff and/or students. In order to minimize confidentiality risks, each subject will be assigned a number and only this number will be included in the data. The only file that associates a participant with their identification number will be encrypted.

The records of this study will be kept private. Any written results will discuss group findings and will not include information that will identify you. Research records will be stored securely and only researchers and individuals responsible for research oversight will have access to the records. It is possible that the consent process and data collection will be observed by research oversight staff responsible for safeguarding the rights and wellbeing of people who participate in the research.

By participating, a subject authorizes the researcher/investigator to voluntarily reveal certain information about research subjects, such as evidence of child abuse or a participant's threatened violence to self or others as well as any other criminal acts.

**Compensation:** Participants/subjects receive no compensation for participation. Participation is completely voluntary. Refusal to participate in this research has absolutely no positive or negative consequences.

**Contacts:**

David A. Greene, Oklahoma State University, PhD Candidate, Primary Investigator  
113 Mable T. Willis Blvd.  
Walterboro, SC 29488  
(843) 908-9161  
dgreene@colletoncounty.org

Dr. Marcus Hendershot, Research Adviser, Oklahoma State University  
203 Murray Hall  
Stillwater, OK 74078  
(405) 744-5640  
marcus.hendershot@okstate.edu

If you have questions about your rights as a research volunteer, you may contact the Oklahoma State University Institutional Review Board (IRB) Interim Chair  
Dr. Tamara J. Mix, Oklahoma State University Institutional Review Board (IRB) Interim Chair  
219 Cordell North  
Stillwater, OK 74078  
(405) 744-3377  
irb@okstate.edu

**Participants Rights:** It must be emphasized that participation in this research is voluntary and subjects can discontinue the research activity at any time without punishment or penalty. There are no risks to subjects that withdraw from participation.

**Signatures:** By volunteering to participate in this research, you are acknowledging that you have read and fully understand this consent form. Moreover, you are signing it freely and voluntarily.

**Participation:** If you are interested in participating in this research, please sign below. The interview and will then begin.

Participant's Printed Name	Participant's Signature
Date	Participant's Identification Number
Primary Investigator's Printed Name	Primary Investigator's Signature

## APPENDIX D – QUANTITATIVE RESEARCH CONSENT FORM

**Purpose:** Oklahoma State University is conducting a research project that involves researching the motives and satisfaction of volunteer firefighters in South Carolina. The purpose of this research is to identify the most important motives. Participation is limited to volunteer firefighters who are 18 years of age or older and are members of fire departments that are served wholly or mostly by volunteer firefighters.

**Procedures:** A survey will be distributed. The survey should take approximately 15 to 20 minutes to complete. The data from the survey will be analyzed using quantitative analysis. The survey is available to all fire departments in South Carolina that are staffed either partially or completely by volunteers. The distribution requires a random sample. Therefore, individuals in your department will be randomly selected to participate.

**Risks of Participation:** Subjects may be bothered by the time it takes to complete the survey. There are no known legal risks to participation. There are no known risks associated with this research project which are greater than those ordinarily encountered in daily life.

**Benefits:** This research will aid others in understanding the motives and satisfaction of volunteer firefighters. It is hoped that a better understanding of these motives can lead to improvement of volunteer firefighter recruitment and retention programs.

**Confidentiality:** The data collected will be stored on the investigator's laptop which is password protected and is accessible only by the investigator. The data will be kept long enough to complete the research associated with this project and any published manuscripts that stem from it. The results will be reported in a dissertation that will be sent to Oklahoma State University and may be shared with University faculty, staff and/or students. In order to minimize confidentiality risks, each subject will be assigned a number and only this number will be included in the data.

The records of this study will be kept private. Any written results will discuss group findings and will not include information that will identify you. Research records will be stored securely and only researchers and individuals responsible for research oversight will have access to the records. It is possible that the consent process and data collection will be observed by research oversight staff responsible for safeguarding the rights and wellbeing of people who participate in the research.

By participating, a subject authorizes the researcher/investigator to voluntarily reveal certain information about research subjects, such as evidence of child abuse or a participant's threatened violence to self or others as well as any other criminal acts.

**Compensation:** Participants/subjects receive no compensation for participation. Participation is completely voluntary. Refusal to participate in this research has absolutely no positive or negative consequences.

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**Signatures:** By volunteering to participate in this research, you are acknowledging that you have read and fully understand this consent form. Moreover, you are signing it freely and voluntarily.

**Participation:** If you are interested in participating in this research, please click on (or copy and paste into your browser) the following link (by clicking on the link, you are acknowledging that you have read and understand this consent form):

<http://www.samplelink.com>



## APPENDIX E – STRUCTURED INTERVIEW GUIDE

To participants: This interview will aid with research into satisfaction among volunteer firefighters. As you read in the informed consent form, your answers will be assigned to a respondent identification number. The only document that will associate your name with the responder identification number will be encrypted and password protected. Your privacy and anonymity will be maintained to the fullest degree possible. Therefore, it is absolutely critical that you answer the following questions with complete honesty. You should not be concerned with telling me what you think I want to hear as I am not looking for a specific answer. I only want to know what you honestly think. Therefore, you only have to tell me the truth and that will help this research tremendously.

- 1.) In what year were you born?
- 2.) In what year did you begin volunteering as a firefighter?
- 3.) Have you continually or intermittently served as a volunteer firefighters since you started?
- 4.) Does your family have a history of fire service either professionally or volunteer?
- 5.) Are you married?
- 6.) Do you have any children?
- 7.) Are you a member of any other civic organizations (church, Elks lodge, etc.)?
- 8.) How many years of service do you have as a volunteer firefighter?
- 9.) What made you start volunteering as a firefighter?
- 10.) What has kept you volunteering as a firefighter for N (number of) years?

Concept Map Questions (addressing factors not previously mentioned)

- 11.) How important were (factors below) to you deciding to join the volunteer fire service?
  - a. Helping others during a time of need
  - b. Learning and applying new skill sets
  - c. Obtaining training in an attempt to seek full-time employment
  - d. Your family members or friends service as volunteer firefighters
  - e. Having the necessary resources to volunteer that others might not possess
  - f. Being part of valued public service and a desire to improve yourself
  - g. Other factors that we have not discussed
- 12.) How important were (factors below) to you deciding to remain engaged in the volunteer fire service?
  - a. Helping others during a time of need
  - b. Learning and applying new skill sets
  - c. Obtaining training in an attempt to seek full-time employment
  - d. Your family members or friends service as volunteer firefighters
  - e. Having the necessary resources to volunteer that others might not possess
  - f. Being part of valued public service and a desire to improve yourself
  - g. Other factors that we have not discussed

## APPENDIX F – SURVEY INSTRUMENT

### South Carolina Volunteer Firefighter Motivations / Satisfaction

#### Participation Consent Form

**Purpose:** Oklahoma State University is conducting a research project that involves researching the motives and satisfaction of volunteer firefighters in South Carolina. The purpose of this research is to identify the most important motives. Participation is limited to volunteer firefighters who are 18 years of age or older and are members of fire departments that are served wholly or mostly by volunteer firefighters.

**Procedures:** This survey should take approximately 15 to 20 minutes to complete. The data from the survey will be analyzed using quantitative analysis. The survey is available to all fire departments in South Carolina that are staffed either partially or completely by volunteers. The distribution requires a random sample. Therefore, individuals in your department will be randomly selected to participate.

**Risks of Participation:** Subjects may be bothered by the time it takes to complete the survey. There are no known legal risks to participation. There are no known risks associated with this research project which are greater than those ordinarily encountered in daily life.

**Benefits:** This research will aid others in understanding the motives and satisfaction of volunteer firefighters. It is hoped that a better understanding of these motives can lead to improvement of volunteer firefighter recruitment and retention programs.

**Confidentiality:** The data collected will be stored on the investigator's laptop which is password protected and is accessible only by the investigator. The data will be kept long enough to complete the research associated with this project and any published manuscripts that stem from it. The results will be reported in a dissertation that will be sent to Oklahoma State University and may be shared with University faculty, staff and/or students. In order to minimize confidentiality risks, each subject will be assigned a number and only this number will be included in the data. The records of this study will be kept private. Any written results will discuss group findings and will not include information that will identify you. Research records will be stored securely and only researchers and individuals responsible for research oversight will have access to the records. It is possible that the consent process and data collection will be observed by research oversight staff responsible for safeguarding the rights and well-being of people who participate in the research. By participating, a subject authorizes the researcher/investigator to voluntarily reveal certain information about research subjects, such as evidence of child abuse or a participant's threatened violence to self or others as well as any other criminal acts.

**Compensation:** Participants/subjects receive no compensation for participation. Participation is completely voluntary. Refusal to participate in this research has absolutely no positive or negative consequences.

**Contacts:**

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113 Mable T. Willis Blvd.  
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**Participants Rights:** It must be emphasized that participation in this research is voluntary and subjects can discontinue the research activity at any time without punishment or penalty. There are no risks to subjects that withdraw from participation.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

By volunteering to participate in this research, you are acknowledging that you have read and fully understand this consent form. Moreover, you are signing it freely and voluntarily.

Participation: If you are interested in participating in this research, please click the "Next Question" button below to begin the survey.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

**1. Please confirm that you are a volunteer firefighter serving in the state of South Carolina in a department that is predominantly or wholly made up of volunteers and that you are 18 years of age or older.**

- Yes (I am a volunteer firefighter in the State of South Carolina in a department that is predominantly or wholly made up of volunteers and I am 18 years of age or older).
- No

## South Carolina Volunteer Firefighter Motivations / Satisfaction

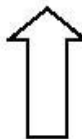
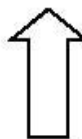
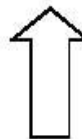
This survey is part of a study that looks at the recruitment, retention and satisfaction of volunteer firefighters. All responses are recorded anonymously and will be kept strictly confidential. Any response you provide cannot be attributed to you in the future.

Answering these questions honestly is very important. You should not be concerned with what you think the correct answer may be, as there is no correct answer. Answering these questions truthfully will help us better understand the volunteer fire service.

The following exercise will prompt you about a factor that may, or may not, be important to your volunteer service. You will be asked to assess the relative importance of this factor at two different points in time: 1) historically - as an initial *Motive to Join* the fire service; and 2) currently - as an *Expectation to Serve* and continue serving within the fire service. After assessing the relative importance of the factor both when you joined and currently, you will be asked to provide a current assessment of your level of satisfaction with it – *Satisfaction with Service*. This simply means that if the factor is important within your decision to continue service, how satisfied with the factor are you at the moment?

An example is listed below.

## 1. A factor will be listed here

	Motive to Join	Expectation to Serve	Satisfaction with Service
Factor	<input type="text"/>	<input type="text"/>	<input type="text"/>
			
	Importance when you joined the volunteer fire service.	Importance today while serving as a volunteer firefighter	Current level of satisfaction with this factor

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 2. The responsibility of protecting my community

	Motive to Join	Expectation to Serve	Satisfaction with Service
Responsibility	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 3. The opportunity to help citizens within my community

	Motive to Join	Expectation to Serve	Satisfaction with Service
Helping Others	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.



**4. The opportunity to be a role model for others**

	Motive to Join	Expectation to Serve	Satisfaction with Service
Role Model	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select "Not Important" for the expectation to serve then select "Not Applicable" for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 5. The opportunity to receive training in emergency response and crisis management

	Motive to Join	Expectation to Serve	Satisfaction with Service
Emergency Response	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 6. The means to learn unique mechanical skills and operate complex equipment

	Motive to Join	Expectation to Serve	Satisfaction with Service
Mechanical Skills	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 7. The goal of obtaining full-time employment within the fire service

	Motive to Join	Expectation to Serve	Satisfaction with Service
Employment	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 8. The opportunity to supplement my regular income

	Motive to Join	Expectation to Serve	Satisfaction with Service
Supplemental Income	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 9. The opportunity to network with community and business leaders

	Motive to Join	Expectation to Serve	Satisfaction with Service
Networking	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 10. A relationship with a local acquaintance that served(s) as a volunteer firefighter

	Motive to Join	Expectation to Serve	Satisfaction with Service
Acquaintance	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 11. A relationship with a close friend or family member that served(s) as a volunteer firefighter.

	Motive to Join	Expectation to Serve	Satisfaction with Service
Friend / Family	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select "Not Important" for the expectation to serve then select "Not Applicable" for satisfaction with service.



## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 12. A sense of fellowship with other firefighters

	Motive to Join	Expectation to Serve	Satisfaction with Service
Fellowship	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 13. The means to pay back the community for my own success

	Motive to Join	Expectation to Serve	Satisfaction with Service
Pay Back	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 14. An abundance of resources, such as vehicle, gear, and time that makes service possible

	Motive to Join	Expectation to Serve	Satisfaction with Service
Resources	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select "Not Important" for the expectation to serve then select "Not Applicable" for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 15. The opportunity to participate in exciting work

	Motive to Join	Expectation to Serve	Satisfaction with Service
Exciting Work	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 16. The prospect of being part of a valued public service

	Motive to Join	Expectation to Serve	Satisfaction with Service
Valued Service	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### 17. A feeling of accomplishment earned by serving as a volunteer firefighter

	Motive to Join	Expectation to Serve	Satisfaction with Service
Accomplishment	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If you select **"Not Important"** for the expectation to serve then select **"Not Applicable"** for satisfaction with service.

## South Carolina Volunteer Firefighter Motivations / Satisfaction

**18. If there was a specific event or other factor that has been important to your service, please list it here.**

## South Carolina Volunteer Firefighter Motivations / Satisfaction

**19. In what year were you born? (enter 4-digit birth year; for example, 1976)**

**20. What is your gender?**

- Female  
 Male

**21. Are you White, Black or African-American, American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific islander, or some other race?**

- White  
 Black or African-American  
 American Indian or Alaskan Native  
 Asian  
 Native Hawaiian or other Pacific Islander  
 From multiple races

**22. Are you married?**

- Yes  
 No

**23. Do you have any children?**

- Yes  
 No



## South Carolina Volunteer Firefighter Motivations / Satisfaction

**24. In what year did you begin volunteering as a firefighter (enter 4-digit year; for example, 1976)?**

**25. Does your family have a history in the fire service either professionally or volunteer?**

- Yes (I have family members that have served or are serving in the fire service)
- No (I have no family members that have served or are serving in the fire service)

**26. Do you belong to an all volunteer or combination (mostly volunteer with some paid personnel) department?**

- All Volunteer (No paid firefighters)
- Combination (Mostly volunteer with some paid personnel)

**27. What is the population of the area your department (or station) serves?**

- Urban
- Sub-urban
- Rural

**28. Have you continuously or intermittently (start-stop-start again) served as a volunteer firefighter since you started?**

- Continuously (I have served since I joined)
- Intermittently (I served, stopped, and began serving again)

**29. Do you serve as a full-time employee of a fire department outside of your volunteer position?**

- Yes
- No

**30. Do you have a warning light, radio or other equipment in your privately owned vehicle?**

- Yes
- No

**31. Did the department provide the warning light, radio, or equipment in your privately owned vehicle?**

Yes

No

## South Carolina Volunteer Firefighter Motivations / Satisfaction

**32. Do you belong to any other civic groups (Church, Elks Lodge, Masons, etc.)? If so, please list the groups that are most important to you.**

**33. Have you witnessed a firefighter experience a severe injury or close call - that almost resulted in severe injury?**

- Yes  
 No

**34. Have you experienced a severe injury or close call - that almost resulted in a severe injury while serving?**

- Yes  
 No

**35. If a close friend and/or family member decided to leave the fire department at which you volunteer, how would that affect you?**

- It would have no effect  
 It would have little effect  
 I would consider leaving the fire department also  
 I would probably leave the fire department also  
 I would definitely leave the fire department also

**36. How likely is it that you will be serving as a volunteer firefighter one year from now?**

- Highly Likely
- Moderately Likely
- Somewhat Likely
- Not Likely

**37. How likely is it that you will be serving as a volunteer firefighter five years from now?**

- Highly Likely
- Moderately Likely
- Somewhat Likely
- Not Likely

**38. How many years from now do you anticipate ending your service as a volunteer firefighter?**

## South Carolina Volunteer Firefighter Motivations / Satisfaction

This concludes the survey! Thank you very much for participating in this research. Remember that a random representative sample will be selected from all the volunteer firefighters in the the state of South Carolina. Therefore, not everyone in your department will be or should be completing this survey.

Thank you again for your participation but more importantly, thank you for serving the citizens of the State of South Carolina as a volunteer firefighter.

## APPENDIX G – INSTITUTIONAL REVIEW BOARD APPROVAL

### Oklahoma State University Institutional Review Board

Date: Tuesday, August 12, 2014  
IRB Application No AS1481  
Proposal Title: Assessing Member Satisfaction within the Volunteer Fire Service in South Carolina

Reviewed and Exempt  
Processed as:

**Status Recommended by Reviewer(s): Approved Protocol Expires: 8/11/2017**

Principal Investigator(s):

David Greene	Marcus Hendershot
198 Overlook Ln	201 Murray
Walterboro, SC 29488	Stillwater, OK 74078

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The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp, are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Cordell North (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,



Tamara Mix, Interim Chair  
Institutional Review Board



## APPENDIX G – RESEARCH ANNOUNCEMENT

### The South Carolina Fire Service needs the help of your volunteer firefighters!

Oklahoma State University is conducting research on the motives, expectations and satisfaction of volunteer firefighters in the state of South Carolina. You are receiving this announcement because your department was identified as using either mostly volunteer firefighters or all volunteer firefighters for staffing.

Participation in this research is limited to volunteer firefighters who are 18 years of age or older and are members of fire departments that are served wholly or mostly by volunteer firefighters. The research involves a simple online survey that should only take 15 to 20 minutes to complete. Because the survey distribution requires a random sample, individuals in your department will be randomly selected to participate. Instructions on which individuals in your department should be given the link to complete the survey are attached.

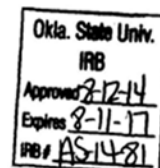
This research will aid others in understanding the motives, expectations and satisfaction of volunteer firefighters. It is hoped that a better understanding of these motives, expectations, and satisfaction can lead to improvement of volunteer firefighter recruitment and retention programs.

Make sure your department's voice is heard! Please see the attached research consent form.

While completion of this survey is voluntary, the results will be essential to improving the understanding of recruitment and retention within the volunteer fire service.

Please direct any questions to:

David A. Greene, Oklahoma State University, PhD Candidate, Primary Investigator  
113 Mable T. Willis Blvd.  
Walterboro, SC 29488  
(843) 908-9161  
dgreene@colletoncounty.org



### APPENDIX C – QUALITATIVE RESEARCH CONSENT FORM

**Purpose:** Oklahoma State University is conducting a research project that involves researching the motives and satisfaction of volunteer firefighters in South Carolina. The purpose of this research is to identify the most important motives, expectations, and satisfaction with service. Participation is limited to volunteer firefighters who are 18 years of age or older and are members of fire departments that are served wholly or mostly by volunteer firefighters.

**Procedures:** An interview will be conducted along with a concept (motive) map exercise. Both should take approximately 30 to 45 minutes to complete. The data from the survey will be analyzed using qualitative analysis. Photographs of the completed concept map will be taken.

**Risks of Participation:** Subjects may be bothered by the time it takes to complete the survey. There are no known legal risks to participation. There are no known risks associated with this research project which are greater than those ordinarily encountered in daily life.

**Benefits:** This research will aid others in understanding the motives and satisfaction of volunteer firefighters. It is hoped that a better understanding of these motives can lead to improvement of volunteer firefighter recruitment and retention programs.

**Confidentiality:** The data collected will be stored on the investigator's laptop, which is password protected and is accessible only by the investigator. The data will be kept long enough to complete the research associated with this project and any published manuscripts that stem from it. The results will be reported in a dissertation that will be sent to Oklahoma State University and may be shared with University faculty, staff and/or students. In order to minimize confidentiality risks, each subject will be assigned a number and only this number will be included in the data. The only file that associates a participant with their identification number will be encrypted.

The records of this study will be kept private. Any written results will discuss group findings and will not include information that will identify you. Research records will be stored securely and only researchers and individuals responsible for research oversight will have access to the records. It is possible that the consent process and data collection will be observed by research oversight staff responsible for safeguarding the rights and wellbeing of people who participate in the research.

By participating, a subject authorizes the researcher/investigator to voluntarily reveal certain information about research subjects, such as evidence of child abuse or a participant's threatened violence to self or others as well as any other criminal acts.

**Compensation:** Participants/subjects receive no compensation for participation. Participation is completely voluntary. Refusal to participate in this research has absolutely no positive or negative consequences.

Oklahoma State Univ.
IRB
Approved 8-12-14
Expires 8-11-17
IRB # AS-1481

**Contacts:**

David A. Greene, Oklahoma State University, PhD Candidate, Primary Investigator  
113 Mable T. Willis Blvd.  
Walterboro, SC 29488  
(843) 908-9161  
dgreene@colletoncounty.org

Dr. Marcus Hendershot, Research Adviser, Oklahoma State University  
203 Murray Hall  
Stillwater, OK 74078  
(405) 744-5640  
marcus.hendershot@okstate.edu

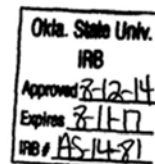
If you have questions about your rights as a research volunteer, you may contact the Oklahoma State University Institutional Review Board (IRB) Interim Chair  
Dr. Tamara J. Mix, Oklahoma State University Institutional Review Board (IRB) Interim Chair  
219 Cordell North  
Stillwater, OK 74078  
(405) 744-3377  
irb@okstate.edu

**Participants Rights:** It must be emphasized that participation in this research is voluntary and subjects can discontinue the research activity at any time without punishment or penalty. There are no risks to subjects that withdraw from participation.

**Signatures:** By volunteering to participate in this research, you are acknowledging that you have read and fully understand this consent form. Moreover, you are signing it freely and voluntarily.

**Participation:** If you are interested in participating in this research, please sign below. The interview and will then begin.

_____	_____
Participant's Printed Name	Participant's Signature
_____	_____
Date	Participant's Identification Number
_____	_____
Primary Investigator's Printed Name	Primary Investigator's Signature



## APPENDIX F – QUANTITATIVE RESEARCH CONSENT FORM

**Purpose:** Oklahoma State University is conducting a research project that involves researching the motives and satisfaction of volunteer firefighters in South Carolina. The purpose of this research is to identify the most important motives. Participation is limited to volunteer firefighters who are 18 years of age or older and are members of fire departments that are served wholly or mostly by volunteer firefighters.

**Procedures:** A survey will be distributed. The survey should take approximately 15 to 20 minutes to complete. The data from the survey will be analyzed using quantitative analysis. The survey is available to all fire departments in South Carolina that are staffed either partially or completely by volunteers. The distribution requires a random sample. Therefore, individuals in your department will be randomly selected to participate.

**Risks of Participation:** Subjects may be bothered by the time it takes to complete the survey. There are no known legal risks to participation. There are no known risks associated with this research project which are greater than those ordinarily encountered in daily life.

**Benefits:** This research will aid others in understanding the motives and satisfaction of volunteer firefighters. It is hoped that a better understanding of these motives can lead to improvement of volunteer firefighter recruitment and retention programs.

**Confidentiality:** The data collected will be stored on the investigator's laptop which is password protected and is accessible only by the investigator. The data will be kept long enough to complete the research associated with this project and any published manuscripts that stem from it. The results will be reported in a dissertation that will be sent to Oklahoma State University and may be shared with University faculty, staff and/or students. In order to minimize confidentiality risks, each subject will be assigned a number and only this number will be included in the data.

The records of this study will be kept private. Any written results will discuss group findings and will not include information that will identify you. Research records will be stored securely and only researchers and individuals responsible for research oversight will have access to the records. It is possible that the consent process and data collection will be observed by research oversight staff responsible for safeguarding the rights and wellbeing of people who participate in the research.

By participating, a subject authorizes the researcher/investigator to voluntarily reveal certain information about research subjects, such as evidence of child abuse or a participant's threatened violence to self or others as well as any other criminal acts.

**Compensation:** Participants/subjects receive no compensation for participation. Participation is completely voluntary. Refusal to participate in this research has absolutely no positive or negative consequences.

### Contacts:

David A. Greene, Oklahoma State University, PhD Candidate, Primary Investigator  
113 Mable T. Willis Blvd.  
Walterboro, SC 29488  
(843) 908-9161  
dgreene@colletoncounty.org

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Approved 8/12/14
Expires 8/11/17
IRB # AS-14-81

Dr. Marcus Hendershot, Research Adviser, Oklahoma State University  
203 Murray Hall  
Stillwater, OK 74078  
(405) 744-5640  
marcus.hendershot@okstate.edu

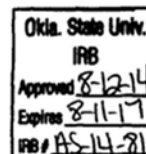
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219 Cordell North  
Stillwater, OK 74078  
(405) 744-3377  
irb@okstate.edu

**Participants Rights:** It must be emphasized that participation in this research is voluntary and subjects can discontinue the research activity at any time without punishment or penalty. There are no risks to subjects that withdraw from participation.

**Signatures:** By volunteering to participate in this research, you are acknowledging that you have read and fully understand this consent form. Moreover, you are signing it freely and voluntarily.

**Participation:** If you are interested in participating in this research, please click on (or copy and paste into your browser) the following link (by clicking on the link, you are acknowledging that you have read and understand this consent form):

<http://www.samplelink.com>



Oklahoma State University Institutional Review Board

Date: Wednesday, January 07, 2015 Protocol Expires: 8/11/2017

IRB Application No: AS1481

Proposal Title: Assessing Member Satisfaction within the Volunteer Fire Service in South Carolina

Reviewed and Processed as: Exempt  
**Modification**

Status Recommended by Reviewer(s) **Approved**

Principal Investigator(s):

David Greene  
198 Overlook Ln  
Walterboro, SC 29488

Marcus Hendershot  
201 Murray  
Stillwater, OK 74078

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The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has not changed. The IRB office **MUST** be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

The reviewer(s) had these comments:

Modification to add Phase II survey to the study.

Signature :

  
\_\_\_\_\_  
Hugh Crethar, Chair, Institutional Review Board

Wednesday, January 07, 2015  
Date

## South Carolina Volunteer Firefighter Motivations / Satisfaction

### Participation Consent Form

**Purpose:** Oklahoma State University is conducting a research project that involves researching the motives and satisfaction of volunteer firefighters in South Carolina. The purpose of this research is to identify the most important motives. Participation is limited to volunteer firefighters who are 18 years of age or older and are members of fire departments that are served wholly or mostly by volunteer firefighters.

**Procedures:** This survey should take approximately 15 to 20 minutes to complete. The data from the survey will be analyzed using quantitative analysis. The survey is available to all fire departments in South Carolina that are staffed either partially or completely by volunteers. The distribution requires a random sample. Therefore, individuals in your department will be randomly selected to participate.

**Risks of Participation:** Subjects may be bothered by the time it takes to complete the survey. There are no known legal risks to participation. There are no known risks associated with this research project which are greater than those ordinarily encountered in daily life.

**Benefits:** This research will aid others in understanding the motives and satisfaction of volunteer firefighters. It is hoped that a better understanding of these motives can lead to improvement of volunteer firefighter recruitment and retention programs.

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**Compensation:** Participants/subjects receive no compensation for participation. Participation is completely voluntary. Refusal to participate in this research has absolutely no positive or negative consequences.

**Contacts:**

David A. Greene, Oklahoma State University, PhD Candidate, Primary Investigator  
113 Mable T. Willis Blvd.  
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203 Murray Hall  
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Okla. State Univ  
IRB  
Page 1  
Approved 1-7-15  
Expires 8-11-17  
IRB # AS-14-81

## South Carolina Volunteer Firefighter Motivations / Satisfaction

This survey is part of a study that looks at the recruitment, retention and satisfaction of volunteer firefighters. All responses are recorded anonymously and will be kept strictly confidential. Any response you provide cannot be attributed to you in the future.

Answering these questions honestly is very important. You should not be concerned with what you think the correct answer may be, as there is no correct answer. Answering these questions truthfully will help us better understand the volunteer fire service.

The following exercise will prompt you about a factor that may, or may not, be important to your volunteer service. You will be asked to assess the relative importance of this factor at two different points in time: 1) historically - as an initial *Motive to Join* the fire service; and 2) currently - as an *Expectation to Serve* and continue serving within the fire service. After assessing the relative importance of the factor both when you joined and currently, you will be asked to provide a current assessment of your level of satisfaction with it - *Satisfaction with Service*. This simply means that if the factor is important within your decision to continue service, how satisfied with the factor are you at the moment?

An example is listed below:

Oklahoma State Univ.  
IRB  
Page 4 Approved: 1-7-15  
Expires: 8-11-17  
IRB #: AS-14-81



VITA

David Arnold Greene

Candidate for the Degree of

Doctor of Philosophy

Thesis: ASSESSING MEMBER SATISFACTION WITHIN THE VOLUNTEER FIRE SERVICE IN SOUTH CAROLINA

Major Field: Fire and Emergency Management Administration

Biographical:

Education:

Completed the requirements for Doctor of Philosophy in Fire and Emergency Management Administration at Oklahoma State University, Stillwater, Oklahoma in May 2016.

Completed the requirements for Master of Business Administration at University of South Carolina, Columbia, South Carolina in December 2010.

Completed the requirements for Bachelor of Science in Sociology at College of Charleston, Charleston, South Carolina in May 1998.

Completed the requirements for Associate of Applied Science in Fire Science at Pikes Peak Community College, Colorado Springs, Colorado in May 2004

Experience:

Firefighter/Paramedic with Colleton County Fire-Rescue (S.C.) from April 1991 to present – current rank Deputy Chief

Adjunct Instructor with South Carolina Fire Academy from October 1997 to present

Professional Memberships:

Executive Fire Officer (National Fire Academy)

Chief Fire Officer Designation (Commission on Professional Credentialing)

MIFireE Grade - Member of Institution of Fire Engineers

Certified Fire and Explosion Investigator (National Association of Fire Investigators)

Advanced Hazardous Materials Life Support Provider and Instructor (University of Arizona, School of Medicine)