

**Assessing Member  
Satisfaction within  
the Volunteer Fire  
Service in  
South Carolina**

# The Problem

- Over two-thirds of the nation's 1,100,450 firefighters are volunteer
- The number of volunteer firefighters has declined over 10% since 1985 while the nation's population has increased 32%
- Today, there are 30,300 fire departments in the U.S. 71.2% are staffed solely by volunteers. Only 8% of fire departments do not utilize volunteer firefighters.
- The American volunteer firefighting force saves taxpayers over \$100 billion annually.
- In 80% of America, volunteers are instrumental in saving lives, protecting property, and providing support to other firefighters.

# 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*?

# Research Design

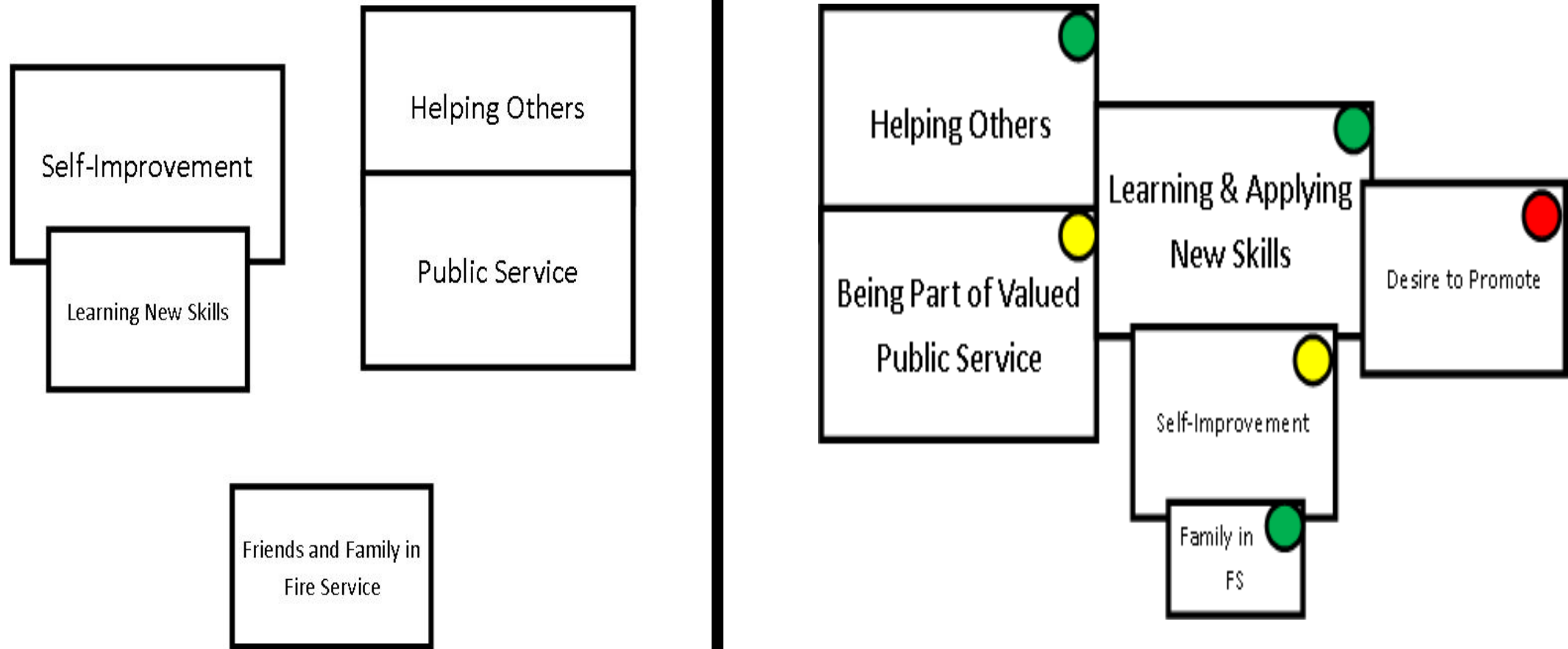
By using the volunteer firefighter as its unit of analysis, this research takes a step beyond previous research.

*“Existing research on volunteers is generic in nature and studies on volunteer firefighters generally examine departments with successful recruitment and/or retention programs. This research is unique as it utilizes the volunteer firefighter as its unit of analysis.”*

# Qualitative Research Design

- Research grounded in Clary, et al. (1998) “motives” to volunteer (values, understanding, career, social, protective, enhancement)
- To assess what factors exist among the volunteer fire service and how these factors fit into the Clary, et al. (1998) framework, I used qualitative methods.
- Interviews and concept mapping exercises among snowball sample (n=25)
- Interviews informed concept maps
- Concept maps identified motives, expectations, and satisfaction at play and informed construction of a survey instrument
- Identified Categories of Joiners

# Qualitative Respondent #8

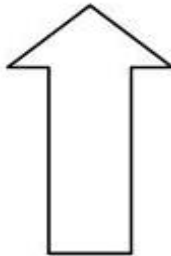


# Quantitative Research Design

- Representative sample created utilizing restricted, proportionate, stratified random sampling method.
- Survey instrument utilized the prevailing individual responses from the qualitative results that were pre-coded to the Clary, et al. (1998) framework.
- Mean values recorded for individual responses / Difference of means tests evaluated factors between control variables.
- Weighted Least Squares Regression used to model service length based on factors, direct/relative import, and control variables.
- Evaluated importance/satisfaction among categories of joiners



# 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                                      |

# The Quantitative Sample (Volunteer Firefighters in South Carolina)

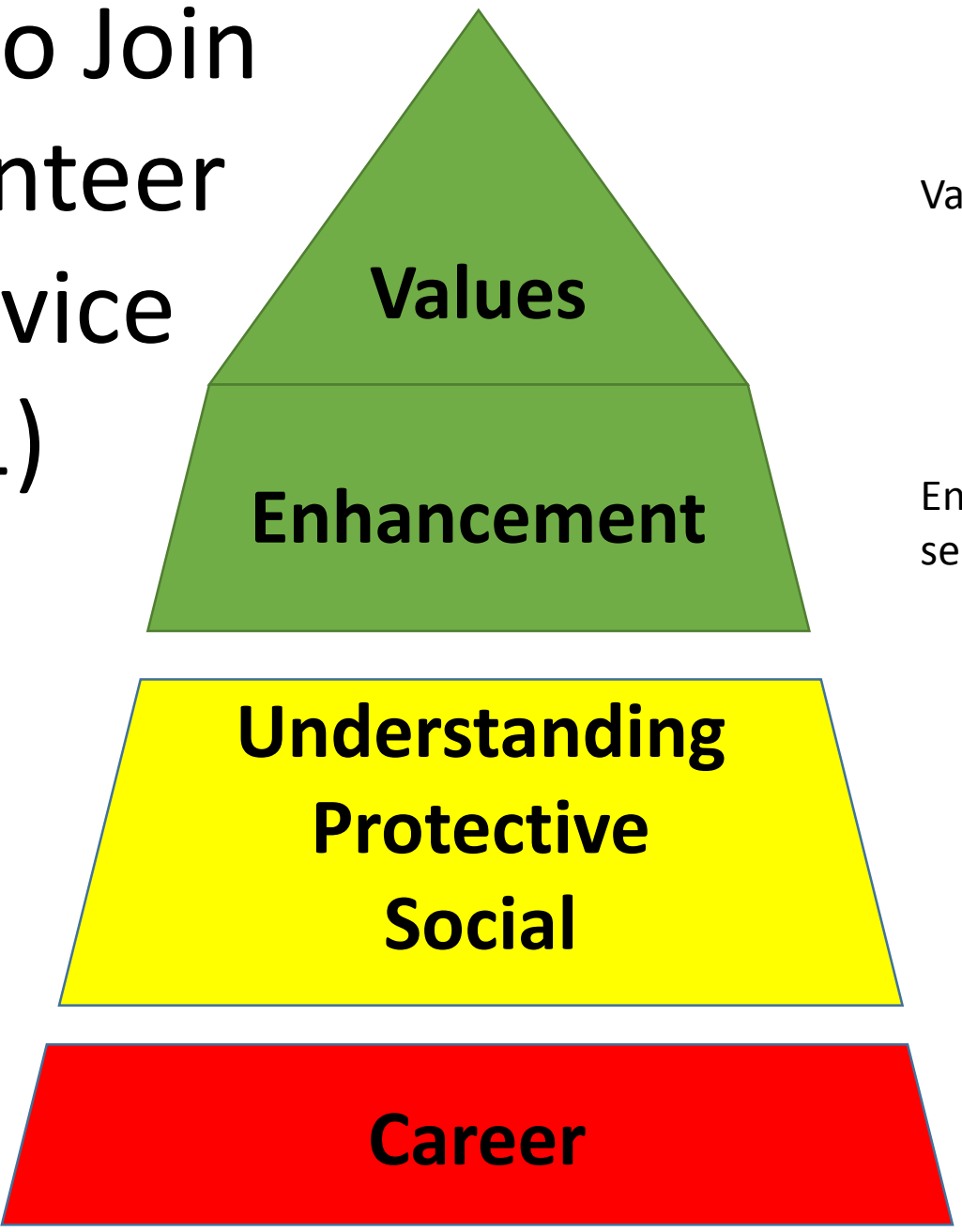
- USFA and SCFFA data sets – wholly and mostly volunteer departments
- Random Number generator for roster slots on departments
- 988 random roster slots issued (95% CL, +/- 3% CI for 13,334).
- Sampling Issues (USFA and SCFFA population data inaccurate)
- Maximum Population Size is 8,465 (63.5%) \*Two Observations here
- 284 surveys completed (217 remaining after listwise deletion)
- This research realized a +/- 6.6% CI at 95% CL for 8,465.
- Oversampled females and minorities (weighted responses)

# Mean Scores

- 4 – High Importance/Satisfaction
- 3 – Moderate Importance/Satisfaction
- 2 – Low Importance/Satisfaction
- 1 – No Importance/Satisfaction

| Table 4.4: Individual Quantitative Motive Importance Responses |               |             |             |             |                  |  |
|--|---------------|-------------|-------------|-------------|------------------|--|
| <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            |  |

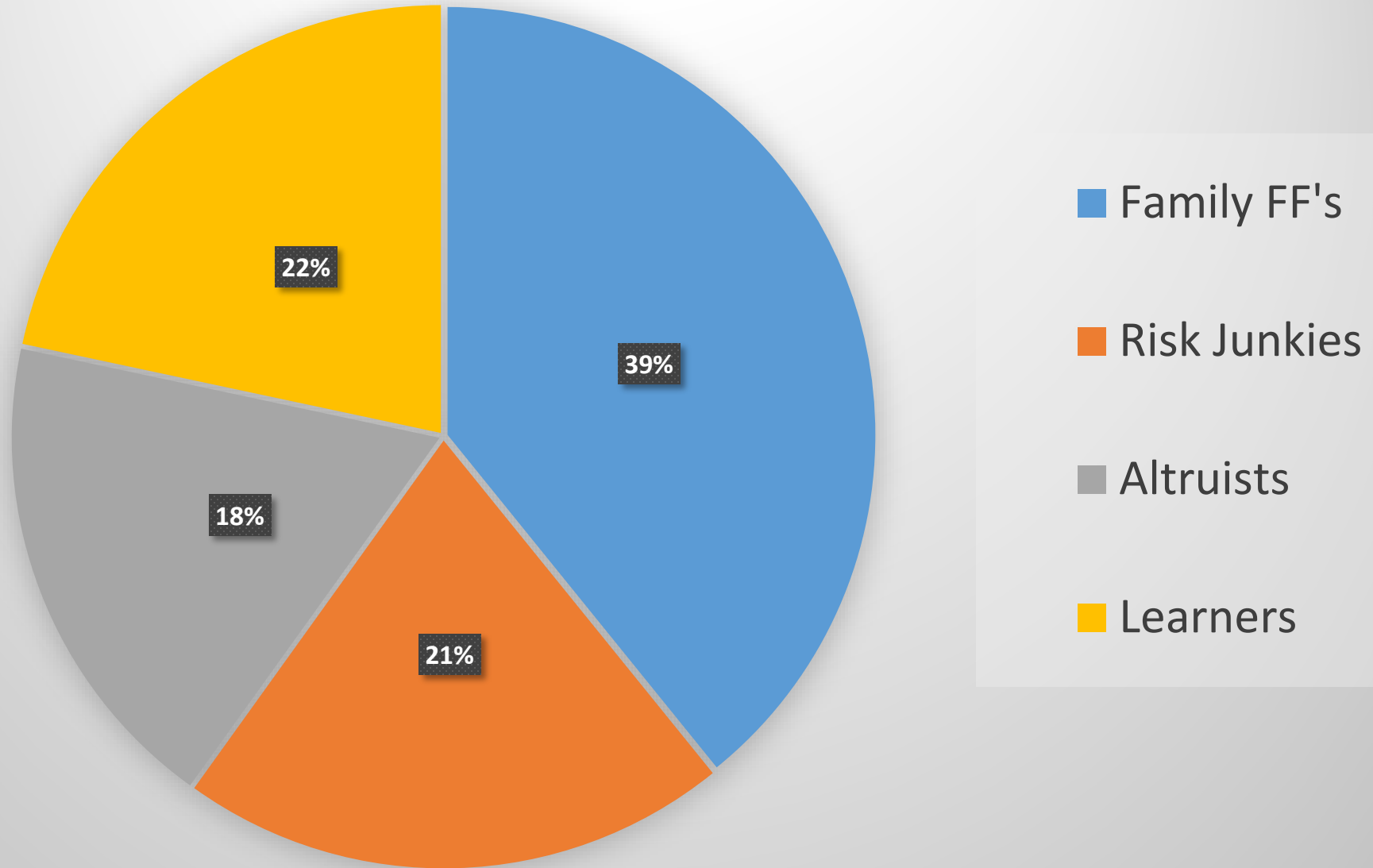
# Motives to Join the Volunteer Fire Service (RQ1)



Values ↑ among non-traditional & unmarried

Enhancement ↑ among unmarried & those serving suburban / urban populations

## Categories Of Joiners within the Representative Sample

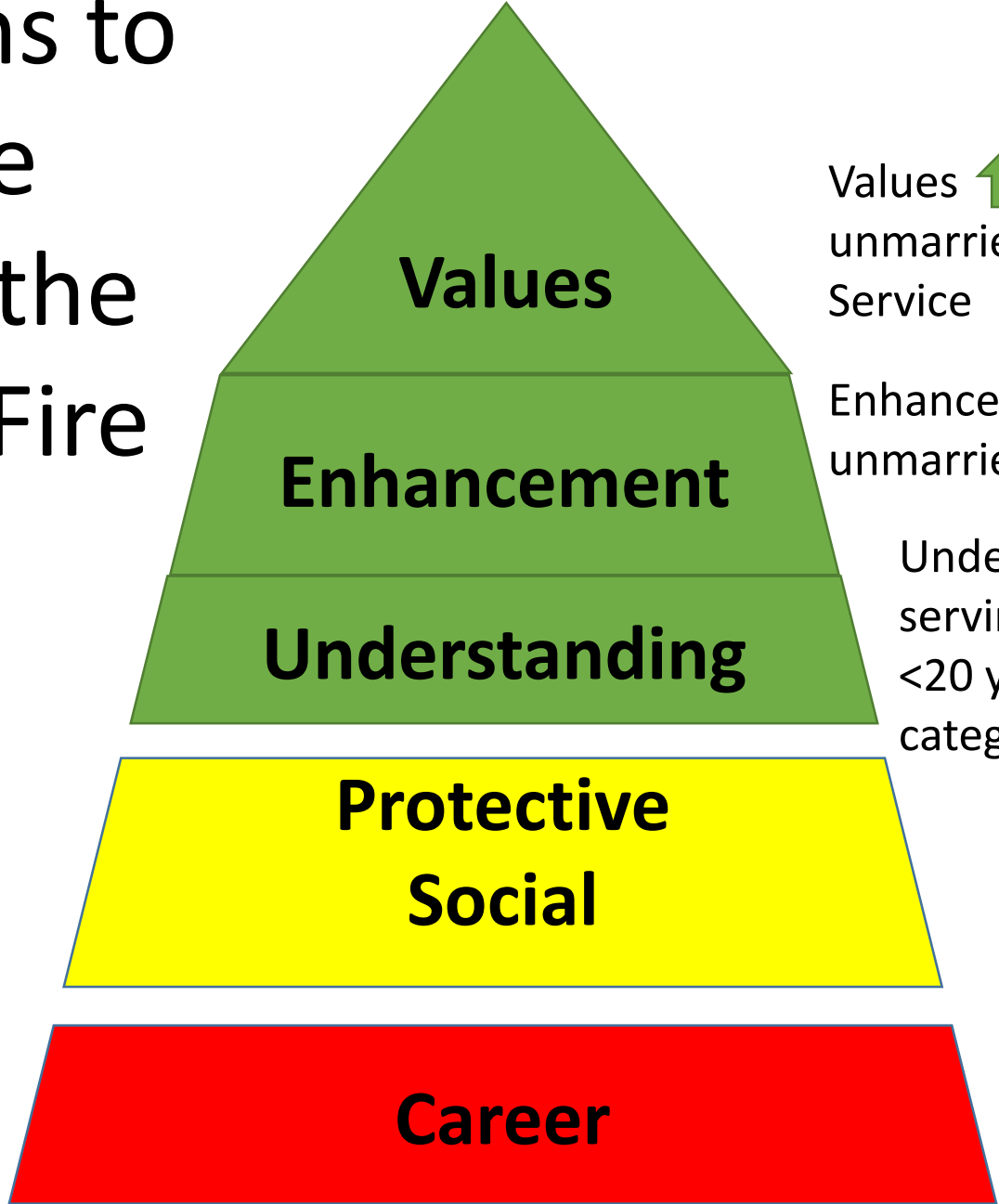


**Table 5.4: Quantitative Individual Motive / Expectation Importance Response Comparison**

| Individual Response as Motive / Expectation    | Clary, et al. (1998) Factor | Motive to Join |           | Expectation |           | Change |
|--|-----------------------------|----------------|-----------|-------------|-----------|--------|
|  |                             | Mean           | Std. Dev. | Mean        | Std. Dev. |        |
| 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.

# Expectations to Continue Serving in the Volunteer Fire Service (RQ2)



Values ↑ among non-traditional, unmarried, and those without FTE in the Fire Service

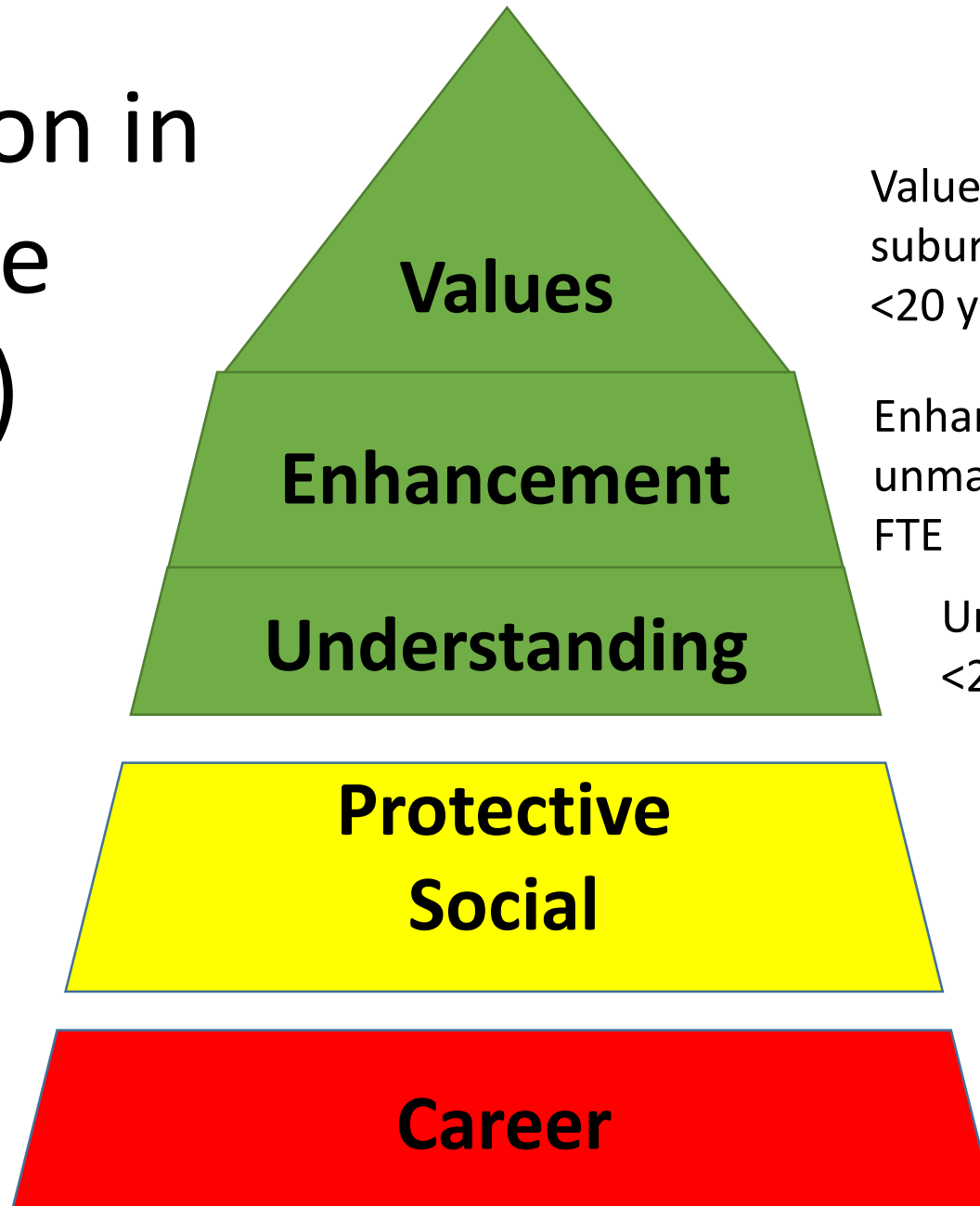
Enhancement ↑ among non-traditional, unmarried & those without children

Understanding ↑ among unmarried, those serving suburban/urban populations, those <20 years of service and ↑ across all categories of joiners



|  |               | <u>Expectation</u> |                  | <u>Satisfaction</u> |                  |                   |
|--|---------------|--------------------|------------------|---------------------|------------------|-------------------|
| <u>Response Item</u>                         |               | <u>Mean</u>        | <u>Std. Dev.</u> | <u>Mean</u>         | <u>Std. Dev.</u> | <u>Difference</u> |
| Helping others                               | Values        | 3.87               | .371             | 3.77                | .498             | -0.10             |
| Civic responsibility                         | Values        | 3.82               | .454             | 3.75                | .565             | -0.07             |
| Feeling of accomplishment                    | Enhancement   | 3.69               | .536             | 3.65                | .569             | -0.04             |
| Being member of a valued public service      | Enhancement   | 3.67               | .543             | 3.57                | .666             | -0.10             |
| Obtaining training                           | Understanding | 3.66               | .552             | 3.56                | .626             | -0.10             |
| Fellowship                                   | Social        | 3.62               | .574             | 3.55                | .626             | -0.07             |
| Excitement                                   | Enhancement   | 3.59               | .646             | 3.53                | .698             | -0.06             |
| Serving as role model                        | Values        | 3.50               | .716             | 3.44                | .763             | -0.06             |
| Acquiring skills                             | Understanding | 3.32               | .818             | 3.31                | .829             | -0.01             |
| Possessing sufficient resources to volunteer | Protective    | 3.28               | .840             | 3.19                | .853             | -0.09             |
| Close friend/family member                   | Social        | 3.05               | 1.019            | 3.14                | 1.016            | +0.09             |
| Payback the community for own successes      | Protective    | 3.07               | .939             | 3.05                | 1.021            | -0.02             |
| Acquaintance                                 | Social        | 2.94               | 1.079            | 2.93                | 1.073            | -0.01             |
| Networking with community/business leaders   | Career        | 2.88               | .988             | 2.83                | 1.018            | -0.05             |
| Gaining employment                           | Career        | 2.46               | 1.127            | 2.49                | 1.262            | +0.03             |
| Supplemental income                          | Career        | 1.81               | 1.090            | 1.92                | 1.212            | +0.11             |

# Satisfaction in Service (RQ3)



Values ↑ among those serving suburban/urban populations, unmarried, <20 years of service, and no FTE

Enhancement ↑ among non-traditional, unmarried, those without children, and no FTE

Understanding ↑ among unmarried, those <20 years of service, no FTE



Conclusions


Data from Tables 5.5 and 6.4 – Aggregated Motive/Expectation Importance and Satisfaction by Clary, et al. factor

|  | <u>Motive to Join</u> | <u>Expectation to</u> |  | <u>Satisfaction</u> |  |
|--|-----------------------|-----------------------|--|---------------------|--|
|--|-----------------------|-----------------------|--|---------------------|--|

The screenshot shows a news article from WBTV News 13. The headline is "[REDACTED] Fire Department uses new policy to pay volunteer firefighters". The author is Nick Sturdivant, and the article was published on May 20, 2016, at 5:32 pm and updated at 6:10 pm. The website includes a navigation menu with options like NEWS, WEATHER, TRAFFIC, WATCH LIVE, SPORTS, COUNT ON HEALTH, LIFESTYLE, and CONTESTS. A search bar is also visible. The article is marked as an advertisement and includes social media sharing icons for Twitter, Google+, Facebook, and Pinterest. A message at the bottom of the article states "We cannot load blog data at this time."

|                |      |      |      |      |       |      |      |       |
|----------------|------|------|------|------|-------|------|------|-------|
| Career factors | 2.21 | .775 | 2.38 | .793 | +0.17 | 2.41 | .882 | +0.03 |
|----------------|------|------|------|------|-------|------|------|-------|

# Practical Implications



Total Number of People  
in the United States  
318.9 million (2014  
Census)

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- 40%

People 18 to 64  
years of age in the  
United States  
194,296,087 (2014  
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- 63%

Traditional Volunteer  
Firefighters (White  
Males) 18 to 64 years  
of age in the United  
States  
72,722,633 (2014  
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Traditional  
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18 to 64 years of  
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-60%

“Family Firefighters”  
within the Traditional  
Volunteer Firefighter 18  
to 64 years of age in the  
United States  
28,485,824

Total Number of People in the United States  
318.9 million  
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People 18 to 64 years of age in the United States  
194,296,087  
(2014 Census)



Traditional Volunteer Firefighters (White Males) 18 to 64 years of age in the United States  
72,722,633  
(2014 Census)



"Family Firefighters" within the Traditional Volunteer Firefighter 18 to 64 years of age in the United States  
28,485,824



South Carolina's Portion of that  
431,619



Colleton County's Portion of that  
3,375

# The BIG Picture

- Recruit outside of “traditional volunteers” and “family firefighters”
- No anchor to naïve motives to join – no limitations on recruiting
- During service, expectations to continue serving generally align with the dominant factors (values, enhancement, and understanding).
- How can our volunteers help others, experience civic responsibility, possess a feeling of accomplishment, be part of our valued public service, obtain training, experience fellowship and feel excited?
- What is it we’re doing every day? (CCFR vs. FDNY)
  - 7,676 (84 = 1.1%) – 1,982,674 (27,403 = 1.4%)

# The BIG Picture

- Manage performance and training standards, without them:



- Understanding factors (Training and Skills) are the key to enabling satisfaction from values and enhancement factors.

|                         | <u>Baseline</u> |        |        | <u>Motive to Join</u> |        |        | <u>Expectation to Serve</u> |        |        | <u>Satisfaction</u> |        |        |
|-------------------------|-----------------|--------|--------|-----------------------|--------|--------|-----------------------------|--------|--------|---------------------|--------|--------|
| <b>Control Variable</b> | $\beta$         | (s.e.) | $\rho$ | $\beta$               | (s.e.) | $\rho$ | $\beta$                     | (s.e.) | $\rho$ | $\beta$             | (s.e.) | $\rho$ |
| <b>Understanding</b>    |                 |        |        | <b>-2.79</b>          | 1.71   | .10    | <b>-2.99</b>                | 1.91   | .12    | <b>-3.43</b>        | 1.91   | .07    |

# Questions?

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