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Retention versus Satisfaction: An Empirical Analysis of Firefighter Paramedic Retention and Job Satisfaction in St. Petersburg Fire & Rescue, Florida

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Certification Statement

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

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Abstract

The problem is that St. Petersburg Fire & Rescue (SPFR) has experienced a thirty-three percent attrition rate for firefighter paramedics since 1996, including a significant increase in the rate of attrition for 2007, creating organizational difficulty to manage and provide Emergency Medical Services. The purpose of this study was to critically analyze current levels of job satisfaction for firefighter paramedics employed by SPFR and to make recommendations for improved retention. Descriptive research is used to answer five research questions intended to discover what the literature suggests influences job satisfaction and to measure differences between firefighters and firefighter paramedics. A survey was created to gather data on job satisfaction for all firefighters and firefighter paramedics. T-tests, ANOVA, and Pearson's correlation matrices were used to identify differences between responses and classifications. Results found that there is a statistically significant difference in aggregate response by firefighter paramedics. Recommendations concerning job enrichment and organizational equity for the firefighter paramedic group were presented.

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Introduction

The city of St. Petersburg is located at the southernmost tip of the peninsula of Pinellas County, Florida. This peninsula is geographically located on the west central coast of Florida. The city of St. Petersburg encompasses approximately 40% of Pinellas County and is surrounded by 244 miles of coastline shared by the Gulf of Mexico, Boca Ciega Bay, and Tampa Bay.

In its 100th year of service, St. Petersburg Fire & Rescue provides an all-hazards approach to public safety that includes Emergency Medical Services (EMS). The problem is that St. Petersburg Fire & Rescue (SPFR) has experienced a thirty-three percent attrition rate for firefighter paramedics since 1996, including a significant increase in the rate of attrition for 2007, creating organizational difficulty to manage and provide Emergency Medical Services. The purpose of this study is to critically analyze current levels of job satisfaction for firefighter paramedics employed by St. Petersburg Fire & Rescue and to make recommendations for improved retention.

This research will utilize descriptive methods to answer the follow research questions.

1. What does the literature suggest are the greatest factors affecting employee job satisfaction?
2. What is the current level of job satisfaction for firefighter paramedics employed with St. Petersburg Fire & Rescue?
3. What is the current level of job satisfaction for firefighters employed with St. Petersburg Fire & Rescue?

4. What are the significant differences, if any, between levels of job satisfaction for firefighters and that of firefighter paramedics?
5. What recommendations are feasible for St. Petersburg Fire & Rescue to implement?

Background and Significance

St. Petersburg Fire & Rescue's mission statement states, "St. Petersburg Fire & Rescue is committed to serve all citizens of our community by promoting, protecting and improving their health, safety and quality of life through exceptional emergency service and education" (St. Petersburg Fire & Rescue [SPFR] Strategic Plan, 2007, p. 18).

In support of this mission, St. Petersburg Fire & Rescue (SPFR) employs 357 personnel distributed over five divisions; Emergency Management, Operations, Rescue, Prevention, and Safety & Training. SPFR utilizes twelve fixed fire station facilities which include ten Basic Life Support (BLS) engine companies, three Advanced Life Support (ALS) engine companies, four BLS truck companies, ten (ALS) rescues, one heavy rescue, and one squad unit. Three specialty teams are also utilized in Technical Rescue, Hazardous Materials, and Water Rescue. Appendix A illustrates the geographical position of the city of St. Petersburg in the Peninsula of Pinellas County as well as each fire station location and response area as defined by the Geographic Information System (GIS).

The city of St. Petersburg is approximately 63 square miles in size and enjoys 244 miles of coastline comprised of the Gulf of Mexico, Boca Ciega Bay, and Tampa Bay (SPFR Standard of Cover, 2007). The population is 261,000, making St. Petersburg the fourth largest city in Florida. The median age and household income is 39.3 years and

$34,597 respectively (United States Census, 2000). The average temperature is 73.7 degrees Fahrenheit and the average number of days of sunshine is 361 (SPFR Standard of Response Coverage [SOC], 2007).

SPFR responded to over 46,000 calls for service in 2006 (SPFR Annual Report, 2007). Emergency Medical Services (EMS) commanded 86% or nearly 39,000 of these calls for service (SPFR Annual Report, 2006). Although, SPFR continues to respond to a working structural fire approximately every three days, statistically, the traditional fire related response is declining. Considerable efforts in code enforcement, plans review, and public education have presumably contributed to this decline.

SPFR's daily shift strength is 104 personnel, of which 25, or approximately 24%, are firefighter paramedics and thus responsible for 86% of the call volume. SPFR also utilizes a minimum manning policy of 80 personnel each day of which 15 or 19% must be firefighter paramedics. In other words, 75 of the 312 line personnel are firefighter paramedics.

Since 1996, SPFR has had 14 firefighter paramedics leave the organization unexpectedly. During that same time period only five firefighter / emergency medical technicians (EMT) severed employment prematurely. This analysis does not include retiring members.

Once again, beginning in 1996 SPFR has had a total of 11 firefighter paramedics voluntarily reclassify to the rank of firefighter EMT. More importantly, six of the 11 voluntary reclassifications occurred in the calendar year for 2007. In other words 2007 experienced an 1100% increase in firefighter paramedics that no longer wish to function as a classified firefighter paramedic as compared to the yearly average covering the last

decade. The combination of firefighter paramedics that have severed employment and the number of firefighter paramedics that sought voluntary reclassification equates to 33% of the workforce.

Similar to many complex issues the retention and recruitment of firefighter paramedics is of growing concern for both the firefighter paramedics that remain with the organization and the organization on several levels. First, a significant emphasis is placed on traditional firefighting skills during a new employees' probationary period of 12 months. A newly hired firefighter paramedic will receive intensive and exclusive firefighting training, experience, and evaluation during the first year of employment. Once completed, a firefighter paramedic will enter a second probationary period of training, experience, and evaluation for an additional seven months. The firefighter paramedic probation is competency based, however, newly licensed clinicians generally use the entire probationary period to adequately demonstrate the skills, knowledge, and abilities required. Therefore, a new firefighter paramedic will not be eligible to provide full function as a firefighter paramedic for nearly two years.

Secondly, the additional strain on current paramedics exists on several fronts. The remaining two-thirds of the firefighter paramedics are in a continual training mode for newly hired firefighter paramedics. In addition to this extra work, fully functioning firefighter paramedics must shoulder the entire responsibility for backfilling daily overtime as well as all special-events such as concerts and parades. Third, the overall paramedic shortage in the state of Florida has placed an increased demand on training institutions to produce more paramedic graduates available for the workforce. St. Petersburg Fire & Rescue is the largest and busiest agency in Pinellas County and is a

primary field training site for St. Petersburg College, the only training institution within Pinellas County. Therefore, tenured firefighter paramedics with SPFR must coordinate the full workload of a firefighter paramedic as well as provide continual training and development to one-third of the firefighter paramedic force and provide the necessary training and development for students. It is not uncommon to have a firefighter paramedic riding with a newly licensed or certified firefighter paramedic as well as a paramedic student.

The statistically significant difference between attrition rates of firefighter EMTs and firefighter paramedics may be answered in the level of current job satisfaction. Additionally, the fact that firefighter paramedics are willing to voluntarily reclassify themselves to a classification that earns 18% or $9,000 less and remain with the organization can be interpreted as both a positive and a negative. Considering the myriad of competing demands and influences this study will focus on the singular aspect of job satisfaction in an effort to identify the underlying causes of such shifts in personnel.

Therefore, the problem is that St. Petersburg Fire & Rescue (SPFR) has experienced a thirty-three percent attrition rate for firefighter paramedics since 1996, including a significant increase in the rate of attrition for 2007, creating organizational difficulty to manage and provide Emergency Medical Services. The purpose of this study is to critically analyze current levels of job satisfaction for firefighter paramedics employed by St. Petersburg Fire & Rescue and to make recommendations for improved retention.

The United States Fire Administration (USFA) is guided by the following 5-year operation objectives: (United States Fire Administration [USFA], 2002)

1. Reducing by 25% the loss of life of the age group 14 years old and below
2. Reducing by 25% the loss of life of the age group 65 years old and above
3. Reducing by 25% the loss of life of firefighters
4. 2,500 communities will have a comprehensive multi-hazard risk reduction plan led by or including the local fire service
5. To appropriately respond in a timely manner to emergent issues

The city of St. Petersburg's youth population consists of 18.1%, or greater than 45,000, ages 14 years and under (Jolley, 2006). In addition, 5.7%, or approximately 14,000, are the age of five years and under (Jolley, 2006). The population of 65 years of age and greater is currently at 17.1%, or nearly 43,000 (United States Census, 2000). Therefore, greater than one-third of St. Petersburg's population falls into the high risk age groups as defined by the United States Fire Administration (USFA).

This research will work directly toward operational objectives numbered one, two, and four. The significant impact of diminishing St. Petersburg Fire & Rescue's ability to deliver quality emergency medical services to the community is in direct contrast to the operational objectives set forth by the USFA.

This applied research project is conducted for partial fulfillment of the Executive Fire Officer Program (EFOP) and for the course titled *Executive Leadership*. The problem is evidenced in every aspect for which an executive fire officer would and should be responsible. In this case study, the organization is having difficulty retaining a minority group of employees that provides the greatest levels of service to the

community. Specifically from the course, Unit 7 titled *Succession / Replacement Planning* deals with the approach of succession planning for top level executives (Executive Leadership Student Manual [ELSM], 2005, p. 7-1). However, concepts are not lost on personnel of lower ranks in a typical paramilitary organization such as St. Petersburg Fire & Rescue. More globally, the problem dictates the leader to excel in decision making as identified in Unit 4 (p. 4-1) as well as managing multiple roles in Unit 5 (p. 5-1) (ELSM, 2005). Lastly, implementation of any potential findings from this applied research project will require negotiation as taught in Unit 11 (p. 11-1); influencing as taught in Unit 12 (p. 12-1); and persuasion as taught in Unit 14 (p. 14-1) (ELSM, 2005).

Literature Review

A comprehensive literature review is provided to summarize the current body of knowledge concerning employee job satisfaction. A holistic approach is utilized to garnish knowledge from a variety of sources and sectors, however, specific summation is provided for the public service and ultimately the fire and emergency services. This literature review will provide a summary over three general constructs of overall job satisfaction, job enrichment, and communications. A brief summary concerning the administration of job satisfaction surveys is also provided. Lastly, a summary statement describing the influence the literature review possessed on the remainder of the applied research project is provided.

Branham (2005) found that "90% of departing employees leave because of issues with their job manager, culture or work environment, yet nearly 90% of managers believe that employees leave and stay mostly for the money" (¶ 1). When discussing overall job

satisfaction, Newstrom and Davis (1997) point out that declining attitudes and levels of job satisfaction are often both a current symptom of an underlying problem and a potential cause of a problem in the future (p. 254). Overall these declining cultures result in increased absenteeism and turnover (Newstrom and Davis, 1997, p. 254). In addition, it is suggested that job satisfaction may decline much faster that it is improved. Pay, supervisory relationships, tasks performed, team interaction, and immediate working conditions are reported as the most important aspects of job satisfaction (Newstrom and Davis, 1997, p. 254). It is also suggested that jobs that more adequately use all the employees' abilities are more accepted by the employee (Newstrom and Davis, 1997, 254).

Bobrowitz (2001) offers seven needs for personal productivity.

1. Your work must have meaning.
2. You must have input into your destiny.
3. You must be paid a fair wage.
4. Your work must add quality to your life.
5. Your work must bring meaningful relationships to your life.
6. Your work must provide variety in what you do.
7. Your work must be viewed as important. (p. 233)

In general, these needs for personal productivity follow findings found by Newstrom and Davis. For example, variety in work correlates with both tasks performed and utilization of full range of employees' abilities. In addition, your work bringing meaningful relationships to your life are cross-referenced with team interaction and those interpersonal dynamics.

A. Saltzstein, Ting, and G. Saltzstein (2001) found that improving job satisfaction leads to improved organizational loyalty, employee advancement, and employee retention (p. 455). However, Saltzstein et al. concede that there may be more of a correlation between job satisfaction and improved organizational performance in contrast to personal or individual performance (p. 455). This belief is echoed by Kim (2002) as she states that there is no correlation between job satisfaction and individual performance. Several researchers have also found that there is a specific loyalty to the job itself rather than to the organization when investigating the emergency services.

Although Lee and Olshfski (2002) found a direct relationship between organizational commitment and job satisfaction (p. 109), the authors found that the job itself is a motivating factor in firefighters (p. 112). This finding is also stated by Skibba (2002) in her study of central Wisconsin firefighters (p. 13). Therefore, one could conclude that organizations that do not have competition will have less threat of employee turnover because employees would have to break both a loyalty to the organization and with the job itself. In contrast, organizations with adjacent competitors could lose employees that are still loyal to the job yet are unfulfilled at the specific organization. Lastly, Bulgarella (2005) found that a direct relationship does exist between employee satisfaction and customer satisfaction.

Kim (2002) found that organizations that have changed from traditional hierarchical organizations to empowered organizations have more satisfied employees which translate to lower absenteeism and turnover (p. 231). In concert, Skibba (2002) found that a negative correlation existed between employee tension and job satisfaction (p. 42). In other words, as tension decreased job satisfaction increased and vice versa.

Buelens and Van den Broeck (2007) report that public sector employees are more motivated by job content, self-development, interesting work, and a chance to learn new things (p. 66). Buelens and Van den Broeck also report that public servants are less motivated by money than their private sector counterparts (p. 67). This is also the finding of Moynihan and Pandey (2007) when investigating public service motivators. According to Moynihan and Pandey education and professional identification (membership) exhibit a statistically significant positive correlation with job satisfaction and interestingly there is no correlation with income (p. 46). If income is not a leading motivating factor in determining levels of job satisfaction than analysis must turn to non-monetary motivators such as job enrichment.

Branham (2005) found that one of the leading causes for employee turnover is "too few growth and advancement opportunities" (¶ 13). As previously presented, Buelens and Van den Broeck (2007) report that public sector employees are more motivated by job content, self-development, interesting work, and a chance to learn new things (p. 66). This sentiment is also supported by Saltzstein et al. (2001) as a positive correlation is found between job involvement and job satisfaction (p. 459).

Additionally, Hays and Kearney (1995) state that training and development activities near the top of importance specifically because they increase job satisfaction, identification (membership), and organizational commitment (p. 136). Newstrom and Davis (1997) recognize that task variety gives employees a greater sense of competence (p. 298). Bobrowitz (2001) supports variety in your work as stated in his seven needs for personal productivity (p. 233). Job rotation is a similar concept to job and skill variety that is reported as a successful job enrichment tactic by Shafritz and Russell (2005). This

technique provides employees with differing work activities similar to cross-training (p. 401). However, Newstrom and Davis recognize that ultimately the employee will decide what will enrich their jobs and that not all employees will choose to be enriched (p. 294).

In contrast to job enrichment activities such as job rotation, continual learning and development, and skill variety, specialized skills may provide the environment for isolation and stratification of employees. Newstrom and Davis (1997) found that excessive division of labor with specialized skills actually caused employees to be isolated and to lose the higher order needs for sense of community and personal growth, resulting in increased turnover and decrease job satisfaction (p. 294).

Conger (1998) believes that there is little understanding of the damage caused by setting up of classes of people (p. 156). Conger believes that all barriers between people and constructs that create classes of people should be broken down to start a positive chain reaction (1998, p. 156). A concept that is supported by Wheatley (2006) is one of breaking down walls and simplifying roles into minimal categories (p. 82). Shafritz and Russell support Wheatley's conclusions and believe that there should be fewer job categories and that each member of a self-directed team should perform multiple tasks (2005, p. 307). Wheatley also recognizes the need for a sense of community as demonstrated by her statement that "roles mean nothing without understanding the network of relationships and that it is foolish to believe that we can define any person solely in the terms of isolated tasks" (2006, p. 72).

G. Steiner and J. Steiner (2000) report that under the "new" employee contract, employees will require continued learning, training, and sense of worth in the work community (p. 625). Traut, Larsen, and Feimer (2000) also report that career learning

and training is essential (p. 3, ¶ 3). Traut et al also recognizes that team work across units should be an expectation as is learning beyond one's immediate job to improve motivation and job satisfaction (p. 3, ¶ 5).

In concert with the higher order needs of social and communal behaviors lays the concept of equality. Kim (2002) believes that merely improving the perception of fair treatment of employees result in lower rates of absenteeism and turnover (p. 231). Rand (2007) offers several concepts of justice; procedural, distributive, and corrective (p. 16). Procedural and Distributive justice are of most importance to this literature review. Distributive justice is defined as the fairness in the distribution of rights or resources within an organization. Procedural justice refers to the fairness of the process by which decisions are made (Rand, 2007, p. 16). Distributive justice is directly aligned to the concept of fairness and equality as described by Kim.

According to Erich (2006) concepts such as inequality and isolation are not new to emergency medical services. For example, Erich reports that a Civil Grand Jury was formed to hear pervasive problems in the San Francisco Fire Department as the task of delivering EMS was undertaken. The 2003 grand jury reported the following corrective actions.

1. Leadership to ensure that EMS is valued on par with fire suppression;
2. Resource allocation to reflect increasing EMS workload;
3. Addressing an ongoing shortage of firefighter paramedics;
4. Better management training for officers, and greater accountability;
5. Ending "harassment" of firefighter paramedics. (limited appreciation, ¶ 1)

Erich also reports that in Washington, D.C., EMS is seen as a stepchild where the "EMS providers feel like they are second-class citizens" (secrets of success, ¶ 8).

The International City/County Managers Association (ICMA) suggests that dual trained firefighter paramedics' willingness to serve in both capacities depends on the culture of the organizational management and workload (International City/County Management Association [ICMA], 1988, p. 357). The impact that workload has is supported by Saltzstein et al (2001) where it was found that job demands have a negative correlation with job satisfaction (p. 459). In other words, as the job demands (workloads) increase job satisfaction decrease and vice versa.

A review of the literature as it pertains to the general category of communications is now provided. Included in the construct of communications are participative management, participatory decision-making, and employee expectations.

Participative Decision Making (PDM), as described by Hays and Kearney (1995), is found to consistently improve both employee attitudes and job satisfaction (p. 184). Shafritz and Russell (2005) recognize that the majority of "new" approaches to management include participative management, the emphasis of teams, and empowerment (p. 306). These approaches are predicated on the assumption that groups provide opportunities for personal and professional growth and increased job satisfaction (Shafritz & Russell, 2005, p. 306). Traut et al. (2000) recognize that employee involvement in decisions affecting their work is motivational (p.3, ¶ 1). Kim (2002) supports these findings by reporting that empowerment activities are most responsive to positive job satisfaction measures (p. 232). Kim's findings expand to include a statistically significant positive correlation between job satisfaction and the manager's

use of participative management, participative strategic planning, and effective communications with supervisors (p. 235).

Harlow (1994) found that in the Fairborn Fire Department a lack of communications up and down the chain of command was a significant weakness (p. 19). In concert with the findings presented concerning participatory management, Harlow presents the follow weaknesses.

1. Upper management is not receptive to ideas and suggestions from line personnel.
2. Work group believes that first-line supervisors, and their work group, have no influence on the organization's activities.
3. Lack of coordination and cooperation among the work groups; problems are discussed but never resolved
4. Work group does not see planning and coordination to guide its efforts. (p. 19-20)

Morgan (1997) offers a solution to the lack of coordination and cooperation among groups in his book titled *Imaginization*. Morgan uses metaphors and models to establish new ways of thinking about traditional problems. In this example, Morgan uses a Venn diagram to emphasize the common features across groups, while differences are de-emphasized (p. 289).

Branham (2005) also believes a lack of communication is one of the main reasons employees become dissatisfied and eventually leave organizations. Branham states that there is not enough feedback or coaching (p. 2, ¶ 5) and that employee's feel devalued and unrecognized (p. 2, ¶ 7). Branham also found that one of the seven reasons employees leave organizations is that their expectations are not met (p. 1, ¶ 6). Branham recommends that employers take additional time during the employee selection process

to accurately share expectations from both the organization and the potential employee. Employee expectations and the ability to participate in decision making is summarized by Wheatley's (2006) belief that new employees arrive at organizations with a desire to contribute something meaningful and to serve (p. 132).

A brief review of the literature concerning the delivery of a job satisfaction survey is provided. First, the approach of job satisfaction surveys as a function of organizational development, research, and self-diagnosis is recommended (Shafritz & Russell, 2005, p. 266). Newstrom and Davis (1997) also support the use of employee surveys and offer the ideal conditions for their success.

1. Top management actively supports the survey.
2. Employees are fully involved in planning the survey.
3. A clear objective exists for conducting the survey.
4. The study is designed and administered in a manner consistent with standards for sound research.
5. Management is capable of taking, and willing to take, follow-up action.
6. Both the results and action plans are communicated to employees. (p. 266)

Harwood (1998) findings for critical success factors are consistent with Newstrom and Davis (p. 46). In addition, Harwood provides a list of common mistakes in the delivery of public sector employee surveys.

1. Under-commitment of internal resources.
2. Confusing the survey with a research study.
3. Expecting a sampling approach to achieve the objects of a census survey.

4. Insufficient involvement of senior management in initial planning and communication.
5. Failing to adequately emphasize and assure anonymity.
6. Asking too many questions on the questionnaire.
7. Asking too much personal information about the respondent.
8. Overdoing consultation in the preliminary stages of project design.
9. Not achieving a satisfactory response rate.
10. Overly complex statistical analysis of results.
11. Allowing too much time to elapse between data collection and distribution of results.
12. Allowing too much time to elapse between feedback and action on results.
13. Not acting on results.
14. Expecting only managers to be accountable for action on results.
15. Failing to implement follow-up surveys. (1998, p. 41)

In summary, this literature review presents findings across several common constructs found in the literature. These are overall job satisfaction, job enrichment, and communications. The concepts of improved communications, participatory management, empowerment, team work, job enrichment, and fairness are nearly universally held by all authors presented.

Specifically to this applied research project several concepts have influenced the intended direction for this study. First, Morgan's (1997) approach of the use of diagrams to illustrate similarities across teams and groups will be utilized. Second, the concepts of fairness, employee classes, and isolation as presented by the majority of author's will be

utilized in another diagram to illustrate the organizational culture as it pertains to these concepts. A comparison and contrast will be used to illustrate the differences in design and function within St. Petersburg Fire & Rescue, a concept presented by ICMA (1988). Lastly, this literature review has helped to develop the framework for a job satisfaction survey and has identified what concepts should be measured. A suggested model for conducting surveys is provided in Appendix B.

Procedures

This study is utilizing descriptive statistics to comprehensively evaluate the current levels of job satisfaction of all line-personnel with the exclusion of supervisory officers as it pertains to firefighter paramedic retention. All procedures have been focused on answering five research questions.

1. What does the literature suggest are the greatest factors affecting employee job satisfaction?
2. What is the current level of job satisfaction for firefighter paramedics employed with St. Petersburg Fire & Rescue?
3. What is the current level of job satisfaction for firefighters employed with St. Petersburg Fire & Rescue?
4. What are the significant differences, if any, between levels of job satisfaction for firefighters and that of firefighter paramedics?
5. What recommendations are feasible for St. Petersburg Fire & Rescue to implement?

The first step is to establish that there is a statistically significant difference in the both the retention rates and the rate of voluntary reclassifications by firefighter

paramedics. The SPFR employee database, in FileMaker Pro, will produce the number of firefighter EMTs and firefighter paramedics that have severed employment within the time period from January 1, 1996 through December 31, 2007. A two-tailed t-test for unequal variances will be performed ($\alpha = .01$). This is tested against the null hypothesis that there is no statistically significant difference in retention rates between firefighters and firefighter paramedics. If the confidence interval is less than or equal to .01 then the null hypothesis must be rejected. In other words, a statistically significant relationship does exist.

To further define the problem for St. Petersburg Fire & Rescue, a two-tailed t-test for unequal variances is used to test the null hypothesis that there is no statistically significant difference in the voluntary reclassification rate for firefighter paramedics in 2007 and the most recent decade ($\alpha = .01$). Data were collected from January 1, 1996 through December 31, 2006 and then January 1, 2007 through December 31, 2007. If the confidence interval is less than or equal to .01 then the null hypothesis must be rejected. In other words, a statistically significant relationship does exist.

Once it is established that there is a statistically significant retention problem for firefighter paramedics within SPFR, the next procedure was to conduct a literature review. The literature review has been utilized to guide the research direction up to and including the formulation of survey questions and which data sets would be most beneficial for analysis. The literature review was started at the National Fire Academy's Learning Resource Center (LRC) in October 2007 during the fourth year EFOP course titled *Executive Leadership*. The LRC provides a large fire and emergency service based collection of research, periodicals, and texts. The literature review was strategically

separated into prevailing themes of overall job satisfaction, job enrichment, and communications. However, limited current information was available at the Learning Resource Center (LRC) requiring the majority of the literature search to be conducted through peered reviewed journals and academia. This approach was correlated to emergency service literature where appropriate for a comprehensive review of the literature. The literature review was used to answer research question number one.

The next step is to utilize the information compiled in the literature review and construct a job satisfaction survey that will measure key factors that affect job satisfaction and ultimately employee retention. In addition to the literature review a small focus group was utilized by personal interview to assist in the development of the survey. Firefighter Neuberger, Firefighter Rodriguez, Firefighter Paramedic Kapchinski, Firefighter Paramedic Witt, and Firefighter Paramedic Rosenberger were in attendance December 24, 2007. This survey is provided as Appendix C. The same survey was utilized to measure both firefighters and firefighter paramedics. However, the results are sorted by the classification as either firefighter or firefighter paramedic for further analysis. The total population of line-personnel, with the exclusion of supervisory personnel, is 251. This population is chosen as the total population of the sum of firefighters and firefighter paramedics currently employed with SPFR. The two subpopulations are 176 and 75 for firefighters and firefighter paramedics, respectively. Therefore, a response rate of 123 firefighters and 63 firefighter paramedics is required to make inferences about the total population (Dodge, 2003, p. 300; Issac & Michael, 1997, p. 201). The response rate was low at 33 and 20 for firefighter paramedics and firefighters, respectively; insufficient to make statistically relevant inferences about the

total population. All surveys are designed to be anonymous; however, they may be sorted by classification as either firefighter or firefighter paramedic. The utilization of this survey instrument is used directly to answer research questions two and three.

Efforts to answer research question number four include a detailed analysis of the data collected from the employee satisfaction surveys. Data are analyzed, compared, and contrasted to identify significant trends or departures in satisfaction by each data point by classification. Two-tailed t-tests for unequal variances will be used to test differences in responses between classifications of one point or greater. These will be used to test the generic null hypothesis is that there is no statistically significant difference in the response of firefighter paramedics as compared to firefighters *(insert topic)* at the $\alpha = .05$ level. An analysis of variance (ANOVA) is utilized to test the null hypothesis that there is no statistically significant difference in the cumulative responses for all questions in the survey between firefighter paramedics and firefighters at the $\alpha = .05$ level. Lastly, three Pearson's correlation matrices will be generated. The first two matrices will test the null hypothesis that no topics in survey question *(insert 13 or 14)* have a statistically significant relationship with overall job satisfaction at the 95% confidence level ($\alpha = .05$). The third correlation matrix is used to test the null hypothesis that there is no statistically significant relationship between any of the questions on the survey used and the perceived job satisfaction for firefighter paramedics at the $\alpha = .05$ level. The questions used in the creation of this matrix are survey questions 1 – 12, and 15. Survey questions 13 and 14 utilized a similar test as presented previously.

Two diagrams are constructed to illustrate differences between classes. First, a comparative analysis is conducted using SPFR job descriptions for firefighters and

firefighter paramedics and results are presented as Appendix D. Second, a comparative analysis is conducted concerning job enrichment activities and organizational equity available to both firefighters and firefighter paramedics and presented in as Appendix E.

Once again a focus group is utilized to evaluate reasonable solutions to issues surfaced by the employee satisfaction survey. Brainstorming techniques were used and the best alternatives were discussed and ranked as to their relative feasibility. The members present for this focus group were Firefighter Paramedic Travis Witt, Firefighter Rob Neuberger, and this author. Members of both classifications were represented and chosen as a matter of convenience. Alternatives with the greatest feasibility rating are forwarded as recommendations for implementation to administration.

Assumptions

It is assumed that all surveys are completed openly, honestly, and with integrity. It is further assumed that all available research and literature were conducted in a like manner. Lastly, it is assumed that there are no underlying cultural influences affecting the ability to apply academic models to SPFR.

Limitations

Currently, SPFR is in a period of never-ending challenges. The state of Florida is facing tax-reform legislation that may greatly affect SPFR's ability to maintain current staffing levels and greatly decreasing the city's ability to afford significant pay increases. During the time of this applied research project, the membership surveyed are working without a contract since October 1, 2007 and just leaving several years of protracted contract negotiations with the city of St. Petersburg. The general consensus is that

morale has declined. Therefore, one significant limitation is the rate of return on surveys and the accuracy with which they are completed. Anonymity is afforded in an effort to garnish open and honest feedback; however, this anonymity may provide an environment ripe for skewed results. Lastly, exit interviews did not provide meaningful data; therefore, the construct of this study is predicated on the assumption that retained employees may hold the answers to the problem. In other words, the employees that are choosing to severe employment are not provided a voice in this analysis.

Definition of Terms

Mean: A measure of central tendency that is the arithmetic average of a sample (Dodge, 2003, p.45).

Median: A measure of central tendency that divides the sorted sample group or data set where 50% is higher and 50% is lower than the median value (Dodge, 2003, p. 51).

Mode: A measure of central tendency that indicates the measure that occurs most frequently within a data set (Dodge, 2003, p. 54).

BLS: Basic Life Support is generally limited to airway maintenance, ventilatory support, CPR, splinting fractures, spinal injuries, and first aid (ICMA, 1988, p. 348).

ALS: Advanced Life Support includes all basic life support measures, plus invasive medical procedures such intravenous and pharmaceutical therapy, and the use of adjunct ventilation devices (ICMA, 1988, p. 348).

ACLS: Advanced Cardiac Life Support provided by ALS systems.

EMS: Emergency Medical Services which are traditionally comprised of either BLS or ALS service levels or a combination of the deliveries.

EMT: Emergency Medical Technician-Basic. (BLS Level)

Paramedic: Emergency Medical Technician-Paramedic (ALS Level)

Swap Time: The ability to exchange shifts within classifications at no cost to the organization.

Acting Officer Positions: Vacancies created by first-tier supervisors are filled with firefighters and firefighter paramedics that meet department policy. When positions are filled by a lower classification it is referred to as an acting officer assignment.

Driving Rotation: A regularly scheduled and dedicated time that an employee is assigned to drive designated apparatus.

Driver Engineer Certification: A 40 hour certification course presented by the department through the Florida Bureau of Fire Standards and Training that certifies personnel to be eligible to drive fire apparatus with fire pumps.

Aerial Operator Certification: A 40 hour certification course presented by the department through the Florida Bureau of Fire Standards and Training that certifies personnel to be eligible to drive apparatus with aerial devices (hydraulic ladders).

ANOVA: A statistical test to determine significant differences between three sample means or greater (Isaac & Michael, 1997, p. 189).

T-test: A statistical test to determine significant differences between two sample means (Isaac & Michael, 1997, p. 183).

Results

Prior to addressing the specific research questions, this author conducted analyses to establish that the differences in retention rates between firefighters and firefighter paramedics employed with the city of St. Petersburg are statistically significant. The first consisted of a two-tailed t-test for unequal variances between the mean numbers of firefighter paramedics that voluntarily reclassified themselves during the calendar year of 2007 and the number of voluntary reclassifications over the preceding decade from 1996 to 2006. Utilizing SPSS software, the t- value is 3.674 and the reported significance for the two-tail test is .005 (Table 1). The significance value .005 is less than the $\alpha = .01$ required of this test. Therefore, the null hypothesis that there is no statistically significant difference in the rate of voluntary reclassifications in 2007 as compared to the yearly average from 1996 to 2006 ($\alpha = .01$) must be rejected.

The significance of this finding is that employed firefighter paramedics are voluntarily reclassifying themselves at a statistically significant rate higher than the organization experienced over the previous decade. This can be stated with greater than 99% confidence. In other words, the opportunity to find or duplicate these findings due to sample variance or by pure chance is 1% or less.

Table 1 Voluntary Reclassifications T-Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
2007	3.674	9	.005	.60000	.2306	.9694
1996-2006	1.000	9	.343	.05000	-.0631	.1631

Next a similar two-tailed t-test for unequal variances was utilized to test the null hypothesis that there is no statistically significant difference in the rate of firefighter paramedics severing employment with St. Petersburg Fire & Rescue and the rate of firefighters severing employment during the period of January 1, 1996 through December 31, 2007 at the $\alpha = .01$ level. Utilizing SPSS statistical software, the t-value is reported at 5.25 and the significance value for a two-tailed test is .001 (Table 2). The significance value .001 is less than the required .01; therefore the null hypothesis must be rejected.

The significance of this finding is that from 1996 to 2007 firefighter paramedics were severing employment with SPFR at a rate that is statistically significantly higher than the rate of firefighters severing employment. This can be reported with greater than 99% confidence. In other words, the opportunity to find or duplicate these findings due to sample variance or by pure chance is 1% or less.

The significance of the problem is statistically established, therefore, all further results will be oriented to answering the five research questioned.

Table 2 Retention by Classifications T-Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
EMT	1.000	9	.343	.50000	-.6311	1.6311
Paramedic	5.250	9	.001	1.40000	.7968	2.0032

The first research question asks what does the literature suggest are the greatest factors affecting employee job satisfaction. As designed, the literature review provided detailed results to this research question. In summary, the most frequently cited factors affecting employee job satisfaction are grounded in the concepts of improved communications, participatory management, empowerment, team work, job enrichment,

and fairness. A survey instrument to gather data concerning employee satisfaction is a direct result of answering research question number one and the literature review.

The developed survey identified five key areas as provided by the literature review. These were communications, participative management, job enrichment, organizational equity, and overall job satisfaction. Please refer to the survey as provided in Appendix C. Each key area will be presented with their respective results in response to the corresponding research question.

Research questions numbered two, three, and four are interrelated at such a level that findings will have more relevance when reported together. Therefore, results for these research questions will be presented simultaneously with appropriate explanation of each result with respect to the specific research question. Research question number two asks what is the current level of job satisfaction for firefighter paramedics employed with St. Petersburg Fire & Rescue. Research question number three asked what is the current level of job satisfaction for firefighters employed with St. Petersburg Fire & Rescue. Research question number four asks, what are the significance differences, if any, between levels of job satisfaction for firefighters and that of firefighter paramedics?

The survey's first two questions force the respondent to identify themselves by classification and tenure; either firefighter or firefighter paramedic and the years of service at the time of the survey grouped into five year increments for the first 20 years and then all others after 20 years of service. The first question allowed detailed analysis of responses by classification. Table 3 provides the aggregate responses by classification and their corresponding percentages. The survey resulted in a total of 53 participants of which 20 were classified as firefighters and 33 were classified as firefighter paramedics.

Table 3 Responses by Classification

Please mark your classification.		
Answer Options	Response Percent	Response Count
Firefighter or Firefighter EMT	37.7%	20
Firefighter Paramedic	62.3%	33
	answered question	53
	skipped question	0

The first key area identified was titled *Communications*. This section consisted of three general questions numbered three, four, and five. These questions utilized a Likert scale from one through five, with one being the lowest level. In an effort to provide more clarity for participants taking this section, a description is provided from "strongly disagree" through "strongly agree". Specific statements are provided in each table with the results.

Results for survey question number three are provided in Tables 4, 5, and 6; firefighter paramedic, firefighter, and all classifications, respectively. All respondents believed that they have good communications with their supervisors at approximately 3.8 or well above the minimal level of agreement and nearly at the mostly agree stage. Specifically concerning research question number four, there is no significant difference between responses across classifications.

Table 4 Question 3 – Firefighter Paramedic

I have good communications with my supervisor.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	1	2	7	13	10	3.878788	33
						answered question	33
						skipped question	0

Table 5 Question 3 - Firefighter

I have good communications with my supervisor.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	2	3	1	4	9	3.789474	19
						answered question	19
						skipped question	1

Table 6 Question 3 – All Classifications

I have good communications with my supervisor.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	3	5	8	17	19	3.846154	52
						answered question	52
						skipped question	1

Results for survey question number four are provided in Tables 7, 8, and 9; firefighter paramedic, firefighter, and all classifications, respectively. Once again, results identified that it is relatively unanimous that all respondents believed that organizational expectations were clearly communicated at hiring. In regards to research question four, there are no significant differences between classifications. The reported range is from 2.97 to 3 for firefighter paramedics and firefighters, respectively. In other words, approximately at the agree level for responses.

Table 7 Question 4 – Firefighter Paramedic

Organizational expectations were clearly communicated to me when I was hired.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	6	6	8	9	4	2.969697	33
						answered question	33
						skipped question	0

Table 8 Question 4 - Firefighter

Organizational expectations were clearly communicated to me when I was hired.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	1	3	11	3	1	3	19
						answered question	19
						skipped question	1

Table 9 Question 4 – All Classifications

Organizational expectations were clearly communicated to me when I was hired.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	7	9	19	12	5	2.980769	52
						answered question	52
						skipped question	1

Survey question number five is the last question contained in the communications section of the survey. Results for this survey question are reported in Tables 10, 11, and 12 in a consistent format. Results demonstrate that there is an approximately 0.5 difference in the response from firefighter paramedics and the relatively higher response by firefighters. However, this is not a statistically significant finding. Therefore, in regards to research question number four, there is no significant difference between classifications.

Table 10 Question 5 – Firefighter Paramedic

Organizational expectations are clearly communicated to me regularly.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	5	9	12	6	1	2.666667	33
						answered question	33
						skipped question	0

Table 11 Question 5 - Firefighter

Organizational expectations are clearly communicated to me regularly.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	0	4	10	4	1	3.105263	19
						answered question	19
						skipped question	1

Table 12 Question 5 – All Classifications

Organizational expectations are clearly communicated to me regularly.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	5	13	22	10	2	2.826923	52
						answered question	52
						skipped question	1

In summary, all classifications for all three questions concerning organizational communication resulted in a relative response of agree, or approximately a 3. In other words, organizational communications is likely not a contributor to overall job dissatisfaction and ultimately difficulties in employee retention.

The next key area of the survey is titled *Participative Management*. This section contained three survey questions; numbers six, seven, and eight. Please refer to Appendix C. Construction of this section is identical to the previously reported section titled *Communications*. All responses will be provided in a consistent order of classification; firefighter paramedic, firefighter, and all classifications, respectively.

Results for survey question number six are provided in Tables 13, 14, and 15. Results provided a nearly uniform response of 2.4 across classifications. This result signifies that all respondents disagree that they are afforded an opportunity to participate

in making decisions that affect them. Therefore, there are no significant differences between responses by classification.

Table 13 Question 6 – Firefighter Paramedic

I am afforded an opportunity to participate in making decisions that affect me.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	6	12	11	2	2	2.454545	33
						answered question	33
						skipped question	0

Table 14 Question 6 - Firefighter

I am afforded an opportunity to participate in making decisions that affect me.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	2	9	6	2	0	2.421053	19
						answered question	19
						skipped question	1

Table 15 Question 6 – All Classifications

I am afforded an opportunity to participate in making decisions that affect me.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	8	21	17	4	2	2.442308	52
						answered question	52
						skipped question	1

Results for survey question number seven are provided in Tables 16, 17, and 18. Results provided a relatively uniform response ranging from 2.1 for firefighters and 2.4 for firefighter paramedics. This result signifies that all respondents disagree that their input is valued by the organization. The minimal variance in responses is not statistically

significant; therefore, there are no significant differences between responses by classification.

Table 16 Question 7 – Firefighter Paramedic

I feel that my input is valued by the organization.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	6	13	10	3	1	2.393939	33
						answered question	33
						skipped question	0

Table 17 Question 7 - Firefighter

I feel that my input is valued by the organization.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	7	5	5	2	0	2.105263	19
						answered question	19
						skipped question	1

Table 18 Question 7 – All Classifications

I feel that my input is valued by the organization.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	13	18	15	5	1	2.288461	52
						answered question	52
						skipped question	1

Survey question number eight is the last question in the participative management section. Results are provided in Tables 19, 20, and 21, respectively. Results demonstrate a uniform response of 1.6 across all classifications. The significance of this result is that all respondents strongly disagree to the statement that organizational decisions and/or

changes are made based on their input. There is no significant difference in responses between classifications.

Table 19 Question 8 – Firefighter Paramedic

Organizational decisions and / or changes are made based on input from me.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	17	11	4	0	1	1.69697	33
						answered question	33
						skipped question	0

Table 20 Question 8 – Firefighter

Organizational decisions and / or changes are made based on input from me.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	9	8	2	0	0	1.631579	19
						answered question	19
						skipped question	1

Table 21 Question 8 – All Classifications

Organizational decisions and / or changes are made based on input from me.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	26	19	6	0	1	1.673077	52
						answered question	52
						skipped question	1

In summary, the section titled *Participative Management* resulted in a relative rating of disagree to strongly disagree over the three questions related to this topic. The significance of this finding is that it suggests that the relative dissatisfaction with participative management activities may correlate with overall job dissatisfaction and ultimately with challenges with employee retention. However, the uniform response

across classifications indicates that there are other factors that have a degree of autocorrelation in order to translate into an issue with employee retention. In other words, all classifications are dissatisfied with the level of participation in management decisions, but only firefighter paramedics are suffering a statistically significant retention problem in relation to the other classification.

The next key area in the survey is titled *Job Enrichment*. This section includes four survey questions numbered nine through twelve. This section is constructed and reported with an identical format to the previous two sections; communications and participative management.

Results for survey question number nine are provided in Tables 22, 23, and 24. Respondents indicated with a relatively uniform response of agree ranging from 2.9 for firefighter paramedics and 3.2 for firefighters in response to their perceived level of empowerment. This 0.3 difference is not statistically significant; therefore, there is no significant difference between classifications.

Table 22 Question 9 – Firefighter Paramedic

I am empowered to make decisions independently when appropriate.							
Answer Options	**Strongly Disagree**	**Disagree**	**Agree**	**Mostly Agree**	**Strongly Agree**	**Rating Average**	**Response Count**
1	1	8	18	3	3	2.969697	33
						answered question	**33**
						skipped question	**0**

Table 23 Question 9 - Firefighter

I am empowered to make decisions independently when appropriate.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	1	3	6	8	1	3.263158	19
						answered question	19
						skipped question	1

Table 24 Question 9 – All Classifications

I am empowered to make decisions independently when appropriate.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	2	11	24	11	4	3.076923	52
						answered question	52
						skipped question	1

Results for survey question number 10 are provided in Tables 25, 26, and 27. The respondents indicated a relatively uniform response of disagree across classifications ranging from 2.2 for firefighter paramedics to 2.5 for firefighters in regards to feeling that they are part of the big picture. The differential between classifications is not at a statistically significant level indicating that there is no significant difference in responses across classifications.

Table 25 Question 10 – Firefighter Paramedic

I feel that I am part of the big picture.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	9	12	10	2	0	2.151515	33
						answered question	33
						skipped question	0

Table 26 Question 10 - Firefighter

I feel that I am part of the big picture.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	3	6	8	2	0	2.473684	19
						answered question	19
						skipped question	1

Table 27 Question 10 – All Classifications

I feel that I am part of the big picture.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	12	18	18	4	0	2.269231	52
						answered question	52
						skipped question	1

Results for survey question number 11 are provided in Tables 28, 29, and 30. Results provided by firefighter paramedics are located in the level of disagree, or approximately 2.3. The results provided by firefighters are in the upper portion of the level of agree, or approximately 3.6 signifying a potentially significant difference across classifications.

Table 28 Question 11 – Firefighter Paramedic

I have the opportunity to learn new skills or jobs.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	9	9	10	4	1	2.363636	33
						answered question	33
						skipped question	0

Table 29 Question 11 - Firefighter

I have the opportunity to learn new skills or jobs.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	1	1	6	8	3	3.578947	19
						answered question	19
						skipped question	1

Table 30 Question 11 – All Classifications

I have the opportunity to learn new skills or jobs.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	10	10	16	12	4	2.807692	52
						answered question	52
						skipped question	1

A two-tailed t-test for unequal variances was utilized to test the null hypothesis that there is no statistically significant difference between responses of firefighter paramedics and firefighters regarding their perceived opportunity to learn new skills or jobs at the $\alpha = .05$ level. SPSS software provided a t-value of 3.631 and a significance value for two-tailed tests of .022 (Table 31). The significance value .022 is less than or equal to .05, therefore the null hypothesis must be rejected. In other words, there is a statistically significance difference in responses by firefighter paramedics as compared to firefighters. This can be stated with 95% confidence leaving less than 5% of an opportunity for these findings to occur as a result of pure chance or sample variance.

Table 31 Question 11 T-test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
FP11	3.631	4	.022	.47273	.1112	.8342
FF11	2.380	4	.076	.71579	-.1193	1.5509

The significance of this finding is that the relative dissatisfaction with the perceived number of opportunities to learn new skills or jobs within the firefighter paramedic classification may contribute to overall job dissatisfaction and ultimately employee retention.

Survey question number 12 is the last question in the section titled *Job Enrichment*. Results are provided in Tables 32, 33, and 34. As with question number 11 the firefighter paramedics provided a relative rating of strongly disagree, or 1.6; while the firefighters responded at a relative rating in the upper portion of the level of disagree, or 2.6. This full point discrepancy may suggest a significant difference in responses across the classifications.

Table 32 Question 12 – Firefighter Paramedic

I have the opportunity to rotate jobs regularly.							
Answer Options	**Strongly Disagree**	**Disagree**	**Agree**	**Mostly Agree**	**Strongly Agree**	**Rating Average**	**Response Count**
1	16	14	2	1	0	1.636364	33
						answered question	**33**
						skipped question	**0**

Table 33 Question 12 – Firefighter

I have the opportunity to rotate jobs regularly.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	2	9	3	4	1	2.631579	19
						answered question	19
						skipped question	1

Table 34 Question 12 – All Classifications

I have the opportunity to rotate jobs regularly.							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
1	18	23	5	5	1	2	52
						answered question	52
						skipped question	1

A two-tailed t-test for unequal variances was utilized to test the null hypothesis that there is no statistically significant difference between responses of firefighter paramedics and firefighters regarding their perceived opportunity to rotate jobs at the $\alpha = .05$ level. SPSS software provided a t-value of 2.141 and a significance value for two-tailed tests of .099 (Table 35). The significance value .099 is greater than .05; therefore the null hypothesis must be accepted. In other words, there is not a statistically significant difference in responses by firefighter paramedics as compared to firefighters. This can be stated with 95% confidence leaving less than 5% of an opportunity for these findings to occur as a result of pure chance or sample variance.

Table 35 Question 12 T-test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
FP12	2.141	4	.099	.32727	-.0971	.7516
FF12	3.244	4	.032	.52632	.0759	.9767

In summary, the results for the section titled *Job Enrichment* provided the first significant departures in perception between the firefighter paramedic group and the firefighter group. Firefighter paramedics provided a relative rating of disagree to strongly disagree over all areas of job enrichment. While firefighters provided a relative rating of approximately agree ranging from disagree to agree. Specifically, survey question 11 proved to have statistical significance. All others failed to provide statistical significance; however, there is evidence that generally firefighter paramedics are dissatisfied with their opportunities for job enrichment while firefighters are relatively satisfied. The significance of these findings are that the absence of activities, especially learning new skills, focused on job enrichment may contribute to overall job dissatisfaction and ultimately employee retention challenges presented by the firefighter paramedics.

The next key section of the survey as provided in Appendix C is titled *Organizational Equity*. This section was developed to measure the concept of fairness as identified in the literature review and in part a result of the answer to research question number one. This section consists of two questions numbered 13 and 14 that differ from the pattern utilized throughout the survey instrument to this point. More accurately, the same general pattern and forced choices are consistent, however, topics are grouped in an

effort to force some thought as to their relationships as well as to their respective importance to each respondent. Listed topics are provided in random order.

Results for survey question 13 are provided in Tables 36, 37, and 38. Firefighter paramedics agreed that they had equal access to swap time, mentoring, and promotions; disagreed with their access to acting officer positions; and strongly disagreed with their access to firefighter overtime, driving rotations, and engine and aerial certifications. Firefighters agreed that they had equal access to swap time, mentoring, engine certification, and acting officer positions; marginally disagreed with their access to aerial certifications and driving rations, a value of 2.88; and substantially disagreed with their access to firefighter overtime. Overall, the perception of equity is in the level of disagree across all categories. The only aggregate topic that is reported in the strongly disagree rating is driving rotations at 1.9.

Table 36 Question 13 – Firefighter Paramedic

I have equal opportunity and access to the following:							
Answer Options	**Strongly Disagree**	**Disagree**	**Agree**	**Mostly Agree**	**Strongly Agree**	**Rating Average**	**Response Count**
Mentoring	3	6	15	6	3	3	33
Swap Time	2	1	17	5	8	3.484848	33
Driving Engineer Certification	14	9	9	0	1	1.939394	33
Aerial Operator Certification	14	12	7	0	0	1.787879	33
Driving Rotations	19	11	3	0	0	1.515152	33
Acting Officer Positions	10	11	11	0	1	2.121212	33
Firefighter Overtime	18	6	6	2	1	1.848485	33
Promotions	2	7	18	4	2	2.909091	33
						answered question	**33**
						skipped question	**0**

Table 37 Question 13 - Firefighter

I have equal opportunity and access to the following:							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
Mentoring	2	4	5	6	1	3	18
Swap Time	1	1	7	2	7	3.722222	18
Driving Engineer Certification	2	3	7	4	2	3.055556	18
Aerial Operator Certification	2	4	7	4	1	2.888889	18
Driving Rotations	4	1	8	4	1	2.833333	18
Acting Officer Positions	2	3	5	4	4	3.277778	18
Firefighter Overtime	5	4	7	2	0	2.333333	18
Promotions	0	6	7	4	1	3	18
						answered question	18
						skipped question	2

Table 38 Question 13 – All Classifications

I have equal opportunity and access to the following:							
Answer Options	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree	Rating Average	Response Count
Mentoring	5	10	20	12	4	3	51
Swap Time	3	2	24	7	15	3.568627	51
Driving Engineer Certification	16	12	16	4	3	2.333333	51
Aerial Operator Certification	16	16	14	4	1	2.176471	51
Driving Rotations	23	12	11	4	1	1.980392	51
Acting Officer Positions	12	14	16	4	5	2.529412	51
Firefighter Overtime	23	10	13	4	1	2.019608	51
Promotions	2	13	25	8	3	2.941176	51
						answered question	51
						skipped question	2

Differences are expected in the areas of engine and aerial operator certifications and driving rotations due to known organizational policy regarding these issues of job equity. Therefore, these differences will not be tested statistically. There is a discrepancy of greater than one full point regarding equal access to acting officer opportunities where the firefighter paramedics disagree that they have equal access while the firefighter group agree that they have equal access. A two-tailed t-test of unequal variances was utilized to test the null hypothesis that there is no statistically significant difference in perceived access to acting officer positions by firefighter paramedics in relation to firefighters at the $\alpha = .05$ level. The resulting t-value is 2.337 for firefighter paramedics and the significance is .80 (Table 39). The significance of .80 is greater than the required .05; therefore the null hypothesis must be accepted. In other words, there is no statistically significant difference in responses across classifications.

Table 39 Question 13 T-test for Acting Officer Positions

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
FFPar	2.337	4	.080	.42424	-.0799	.9283
FF	3.520	4	.024	.65556	.1384	1.1727

A general trend of lower satisfaction among paramedics is not statistically supported in relation to the perceptions of firefighters in St. Petersburg Fire & Rescue for survey question number 13. In an effort to provide greater clarity to the relationship between these issues of organizational equity and overall job satisfaction a Pearson's correlation matrix is generated. This correlation matrix is utilized to test the null hypothesis that no topics in survey question thirteen have a statistically significant

relationship with overall job satisfaction at the 95% confidence level. The results of this analysis are provided in Table 40.

Table 40 Question 13 Correlation Matrix – Firefighter Paramedic

	Mentoring	Swap	Engine	Aerial	Driving	Acting	FFOT	Promotion	Job Sat
Mentoring	1	.923(*)	-.256	-.155	.150	-.091	.170	.131	.424
Swap	.923(*)	1	-.089	.029	.468	.217	.438	.345	.679
Engine	-.256	-.089	1	.976(**)	.382	.863	.543	.609	.517
Aerial	-.155	.029	.976(**)	1	.537	.905(*)	.701	.529	.536
Driving	.150	.468	.382	.537	1	.767	.959(**)	.256	.579
Acting	-.091	.217	.863	.905(*)	.767	1	.821	.669	.745
FFOT	.170	.438	.543	.701	.959(**)	.821	1	.247	.558
Promotion	.131	.345	.609	.529	.256	.669	.247	1	.892(*)
Job Sat	.424	.679	.517	.536	.579	.745	.558	.892(*)	1

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Several correlations exist throughout the matrix such as a statistically significant positive correlation between having access to engine and aerial certifications. This test is designed to measure the relationship between the reported perceptions regarding topics listed in survey question 13 and overall job satisfaction. The results of this test demonstrate that access to promotions are statistically significantly correlated to overall

job satisfaction and therefore must reject the null hypothesis that there are no statistically significant relationships between job satisfaction and topics included in survey question number 13. However, it is important to illuminate the fact that the results of overall job satisfaction are independently rated as survey question number 15 and is not automatically generated as an accumulation or summation of previous responses. In other words, the degree of contribution to overall job satisfaction by any of the topics measured is not reportable.

Results for survey question number 14 are provided in Tables 41, 42, and 43 and serves as the last question utilized under the section titled *Organizational Equity*. Survey question 14 is presented similarly to survey question 13 except that the numerical rating is reversed. In this question respondents are asked to rate the presented topics in order of importance to them starting with one. Therefore, the lower the rating the higher the relative level of importance it has for each respondent. Please refer to Appendix C.

Respondents from the firefighter paramedic group identified quality communications, being part of the big picture, participative management, opportunity to learn new jobs or skills, and equal access to all aspects of the organization as the top five responses in their order of importance. These are followed by job rotation, organization expectations, and empowerment.

Respondents from the firefighter group identified quality communications, being part of the big picture, participative management, opportunity to learn new skills or jobs, and empowerment as the top five responses in their order of importance. These are followed by understanding organizational expectations, job rotation, and lastly equal access to all aspects of the organization.

Table 41 Question 14 – Firefighter Paramedic

Please rank the following in order of importance to you. For example, a (1) would be of most importance to you.										
Answer Options	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Rating Average**	**Response Count**
Quality Communications	10	4	2	3	8	2	2	2	3.575758	33
Understanding Organizational Expectations	0	4	7	3	2	6	5	6	5.151515	33
Participating in Management Decisions	6	3	4	6	4	4	4	2	4.121212	33
Empowerment	0	4	2	5	9	2	4	7	5.30303	33
Being Part of the Big Picture	4	5	5	8	5	2	2	2	3.878788	33
Opportunity to learn new skills or jobs	4	4	6	4	0	11	4	0	4.242424	33
Opportunity to rotate jobs regularly	4	4	2	3	4	3	6	7	5.030303	33
Equal Access to all aspects of the job	5	5	5	1	1	3	6	7	4.69697	33
									answered question	**33**
									skipped question	**0**

Overall both classifications provided the following in order of their importance:

1. Quality communications
2. Being part of the big picture
3. Participative management
4. Opportunity to learn new skills or jobs
5. Understanding organizational expectations
6. Equal access
7. Empowerment
8. Job rotation

Table 42 Question 14 - Firefighter

Please rank the following in order of importance to you. For example, a (1) would be of most importance to you.										
Answer Options	1	2	3	4	5	6	7	8	Rating Average	Response Count
Quality Communications	8	5	1	0	0	0	2	1	2.529412	17
Understanding Organizational Expectations	0	3	3	2	4	0	3	2	4.705883	17
Participating in Management Decisions	3	2	2	2	1	3	0	4	4.470588	17
Empowerment	2	0	4	4	1	2	1	3	4.588235	17
Being Part of the Big Picture	1	2	2	4	5	2	1	0	4.176471	17
Opportunity to learn new skills or jobs	2	1	2	1	4	6	0	1	4.588235	17
Opportunity to rotate jobs regularly	1	2	2	1	1	3	4	3	5.294117	17
Equal Access to all aspects of the job	0	2	1	3	1	1	6	3	5.647059	17
									answered question	17
									skipped question	3

The top four responses with the highest priority for respondents are unanimous across classifications. The concept of equal access is valued more highly by the firefighter paramedic group than found with the firefighter group. It is important to recognize that both groups have synonymous desires for equity within the organization, yet the firefighter paramedics are experience a retention challenge, where the firefighter group is not experiencing this same affect. Results suggest that the cause may be the lack of job enrichment (equity) activities found in question 13 for the firefighter paramedic group.

In an effort to provide analysis of potential causes of this phenomenon, a Pearson's correlation matrix is developed utilizing answers provided by firefighter

paramedics in survey question 14. This correlation matrix is used to test the null hypothesis that none of the topics provided in survey question 14 have a statistically significant relationship with job satisfaction for firefighter paramedics at the $\alpha = .05$ level.

Table 43 Question 14 – All Classifications

Please rank the following in order of importance to you. For example, a (1) would be of most importance to you.										
Answer Options	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Rating Average**	**Response Count**
Quality Communications	18	9	3	3	8	2	4	3	3.22	50
Understanding Organizational Expectations	0	7	10	5	6	6	8	8	5	50
Participating in Management Decisions	9	5	6	8	5	7	4	6	4.24	50
Empowerment	2	4	6	9	10	4	5	10	5.06	50
Being Part of the Big Picture	5	7	7	12	10	4	3	2	3.98	50
Opportunity to learn new skills or jobs	6	5	8	5	4	17	4	1	4.36	50
Opportunity to rotate jobs regularly	5	6	4	4	5	6	10	10	5.12	50
Equal Access to all aspects of the job	5	7	6	4	2	4	12	10	5.02	50
									answered question	**50**
									skipped question	**3**

When referring to Table 44, it is found that a number of factors have statistically significant relationships with each other. However, there are no statistically significant correlations with any of the topics provided in survey question 14 and overall job satisfaction. Therefore, the null hypothesis must be accepted. In other words, with greater than 95% certainty it is reported that there is no relationship between job

satisfaction and any topic provided in survey question 14 for the firefighter paramedic group.

The degree of auto-correlation should be further examined.

Table 44 Question 14 Correlation Matrix – Firefighter Paramedic

	Comm.	Org Exp	Part. Mgmt	Empower-ment	Big Pic	New Skills	Rotate Jobs	Equal Access	Job Sat
Comm.	1	.973(**)	.592	.713	-.459	-.796	-.987(**)	-.925(*)	-.501
Org. Expectation	.973(**)	1	.584	.801	-.260	-.852	-.974(**)	-.982(**)	-.567
Part. Mgmt	.592	.584	1	.398	-.347	-.812	-.489	-.662	.218
Empower-ment	.713	.801	.398	1	-.132	-.858	-.786	-.833	-.785
Big Picture	-.459	-.260	-.347	-.132	1	.251	.418	.161	.024
New Skills	-.796	-.852	-.812	-.858	.251	1	.784	.916(*)	.380
Rotate Jobs	-.987(**)	-.974(**)	-.489	-.786	.418	.784	1	.922(*)	.635
Equal Access	-.925(*)	-.982(**)	-.662	-.833	.161	.916(*)	.922(*)	1	.516
Job Satisfaction	-.501	-.567	.218	-.785	.024	.380	.635	.516	1

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

For example, it is found that those respondents that valued quality communications have a positive relationship with organizational expectations. In other words, as the value of quality communications increase the value placed on understanding organizational

expectations also increases. In addition, one who places increased emphasis on quality communications also place a declining value on job rotation and equal access to the entire organization. The same negative relationship for job rotation and equal access were found in those who valued understanding organizational expectations as well. Those respondents who place an increased emphasis on learning new skills and job rotation also place a high value on equal access. It is interesting to note the negative relationship equal access exhibits with quality communications and organizational expectations. Findings suggest that a demonstrated measure of perceived equality within the organization negated the drive to be informed. The inverse is true as well, that emphasis on quality communications and organizational understanding may decrease the perceived need for organizational equality.

In summary, the section titled *Organizational Equity* demonstrated that there are minimal differences in the values and desires placed on topics for question 14 across both groups. However, there are significant differences between the level of agreement to access from the firefighter paramedic group as compared to the firefighter group. Most notably, firefighter paramedics do not believe that they have an equal opportunity to fill acting officer positions, earn engine and aerial driving certifications as well as their respective driving rotations in comparison to the firefighter group. However, only the acting officer positions were tested statistically and found to not be sufficiently distant. Driving certifications and access to their respective driving rotations are significant but not tested because access these privileges are denied by organizational policy. Additionally, it is found that many of the variables were valued identically throughout the two groups. Additional analyses provided insight into some autocorrelation between

variables but retired prior to establishing statistical evidence of a demonstrated relationship to the perceived overall rating of job satisfaction. Lastly, job satisfaction is measured as a standalone rating and is not a summation of all other entries. Therefore, any potential relationships, or lack thereof, of a single variable to job satisfaction cannot be construed as causal or as a contributor to the overall rating for job satisfaction.

Survey question number 15 is located in the key area titled *Job Satisfaction* and is the last question in the survey. Results for survey question 15 are found in Tables 45, 46, and 47. Results demonstrate that the overall perceived level of job satisfaction is relatively uniform across classifications. The values range from 2.6 to 2.8 for firefighter paramedics and firefighters, respectively. Therefore, there is no significant difference across classifications in overall job satisfaction as reported in survey question number 15.

Table 45 Question 15 – Firefighter Paramedic

Please rate your overall job satisfaction.							
Answer Options	Very Dissatisfied	Dissatisfied	Satisfied	Mostly Satisfied	Very Satisfied	Rating Average	Response Count
1	3	12	12	5	1	2.666667	33
						answered question	33
						skipped question	0

Table 46 Question 15 - Firefighter

Please rate your overall job satisfaction.							
Answer Options	Very Dissatisfied	Dissatisfied	Satisfied	Mostly Satisfied	Very Satisfied	Rating Average	Response Count
1	1	6	5	4	1	2.882353	17
						answered question	17
						skipped question	3

Table 47 Question 15 – All Classifications

Please rate your overall job satisfaction.							
Answer Options	Very Dissatisfied	Dissatisfied	Satisfied	Mostly Satisfied	Very Satisfied	Rating Average	Response Count
1	4	18	17	9	2	2.74	50
						answered question	50
						skipped question	3

The general lack of statistically significant differences in overall job satisfaction between the firefighter paramedics and the firefighters requires further analysis. Overall, a trend exists to demonstrate a lower level of agreement for firefighter paramedics than with firefighters, albeit not statistically significant in most cases. Therefore, an analysis of variance (ANOVA) is utilized to test the null hypothesis that there is no statistically significant difference in the cumulative response for all questions in the survey between firefighter paramedics and firefighters at the $\alpha = .05$ level. SPSS software was used to generate the F statistic of 25.076 and a significance of .011. The significance of .011 is less than or equal to the .05 alpha level. Therefore, the null hypothesis must be rejected. There is a statistically significant difference in the cumulative responses to all questions in this survey between the firefighter paramedics and firefighters. In other words, firefighter paramedics are generally less agreeable and less satisfied than their firefighter counterparts when analyzing responses to this survey. This can be stated with greater than 95% confidence yielding less than a 5% opportunity for this finding to occur by pure chance.

Table 48 ANOVA for All Survey Responses

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	25.771	23	1.120	25.076	.011
Within Groups	.134	3	.045		
Total	25.905	26			

Additionally, a Pearson's correlation matrix is created to measure the relationships between the key areas of the survey and job satisfaction. The correlation matrix is utilized to test the null hypothesis that there is no statistically significant relationship between any of the questions on the survey used and the perceived job satisfaction for firefighter paramedics at the $\alpha = .05$ level. The questions used in the creation of this matrix are survey questions 1 – 12, and 15. Survey questions 13 and 14 utilized a similar test as presented previously. When referring to Table 49, notice that the key areas from the job satisfaction survey are highlighted in different colors to assist identifying key areas and their relationships with other key areas as well as overall job satisfaction.

Table 49 Correlation Matrix – Firefighter Paramedic

	Communications			Participative Management			Job Enrichment				Job Satisfaction
	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.15
Question3	1	.910(*)	.904(*)	.046	-.230	-.313	.496	.276	-.406	-.578	.081
Question4	.910(*)	1	.954(*)	.356	.144	.094	.577	.551	-.039	-.337	.444
Question5	.904(*)	.954(*)	1	.100	-.020	.012	.336	.652	-.100	-.496	.339
Question6	.046	.356	.100	1	.877	.711	.768	.151	.628	.670	.794
Question7	-.230	.144	-.020	.877	1	.941(*)	.487	.317	.924(*)	.839	.924(*)
Question8	-.313	.094	.012	.711	.941(*)	1	.198	.546	.968(**)	.724	.901(*)
Question9	.496	.577	.336	.768	.487	.198	1	-.150	.166	.349	.515
Question10	.276	.551	.652	.151	.317	.546	-.150	1	.419	-.174	.558
Question11	-.406	-.039	-.100	.628	.924(*)	.968(**)	.166	.419	1	.815	.870
Question12	-.578	-.337	-.496	.670	.839	.724	.349	-.174	.815	1	.619
Question15	.081	.444	.339	.794	.924(*)	.901(*)	.515	.558	.870	.619	1

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

It is found that the only statistically significant relationship exists within the *Participative Management* area and job satisfaction, specifically questions seven and eight. In addition, a statistically significant correlation exists between questions seven

and eight and question number eleven in the *Job Enrichment* key area. In other words, the more a respondent believes that their input is both valued and utilized in decision making the more those respondents are in agreement that they are able to learn new skills and jobs. Since a statistically significant relationship exists between *Participative Management* and *Job Satisfaction* the null hypothesis must be rejected as there is a statistically significant relationship with greater than 95% confidence.

Lastly, analyses were conducted as to the differences in responses to all survey questions sorted by one of five groups based on tenure with the organization. However, this evidence comprises an enormous volume with little statistical relevance. Therefore, it will not be presented. Table 50 represents the number of responses by firefighter paramedics in each tenure group. This is provided to illustrate the small sample size available; a sample size insufficient to make inferences about the total population.

Table 50 Question 2 Tenure – Firefighter Paramedic

Please mark the most appropriate answer for your years of service with St. Petersburg Fire & Rescue.		
Answer Options	**Response Percent**	**Response Count**
0-5 years	12.1%	4
6-10 years	18.2%	6
11-15 years	15.2%	5
16-20 years	15.2%	5
20+ years	39.4%	13
	answered question	**33**
	skipped question	**0**

In summary, a statistically significant difference exists between the cumulative results of this survey between classifications. Additionally, a statistically significant relationship exists between the perceived opportunity for promotions and job satisfaction. The desire to learn new skills and jobs is found consistently to have a high significance.

The general need for job enrichment, specifically the learning of new skills and jobs, are in contrast with the availability of such job enrichment activities for firefighter paramedics. Examples would include the ability to obtain engine and aerial certifications as well as participate in dedicated driving rotations. Once again, the opportunity to function as an acting officer is perceived as less opportune for firefighter paramedics. Participatory management demonstrates a statistically significant relationship with perceived job satisfaction; specifically questions seven and eight. Lastly, organizational equality is generally viewed as equally important across classifications yet only firefighter paramedics are experiencing retention problems potentially due to a lack of organizational equity demonstrated in the results of question 13. Illustrations are provided in Appendices D and E in relation to organizational design and culture, respectively. Appendix D was created as a general illustration based on the current job descriptions for the positions of firefighter and firefighter paramedic. Appendix E was created based on the findings from this study.

Research question number five asks what recommendations are feasible for St. Petersburg Fire & Rescue to implement. A brainstorming session and brief discussion was chosen to foster several recommendations based on the results of this survey. Each valid suggestion is provided a rating as to its believed feasibility for implementation.

Results of a brainstorming session conducted on January 23, 2008 by Firefighter Paramedic Travis Witt, Firefighter Rob Neuberger, and this author is provided with a brief examination of the feasibility. Participants were chosen as a matter of convenience and that each participant has less than 10 years of service with SPFR. This author

believed that historical perspective may impede the brain storming session and their solutions to a retention problem that exists within the first ten years of employment.

Table 51 provides an overview of the suggestions provided and a brief summary of the discussion that contributed to the feasibility rating. Feasibility has been categorized as high, moderate, or low. High feasibility would indicate that the suggestion would be feasible in short notice if approved by administration. Due to severe budget cuts within Florida and SPFR, highly feasible suggestions are considered to have little or no fiscal requirements. A feasibility rating of moderate would indicate that the suggestion may have difficulty with immediate implementation. Low feasibility is indicative of a low probability of this suggestion coming to fruition. A low feasibility rating is not an indication of a poor idea, but rather one that may have a high degree of difficulty for delivery to the implementation stage.

Table 51 Feasibility Matrix

Suggestion	Feasibility	Comments
Job Rotations Driving Rotation	Low	Not statistically supported for universal application. Offer it for those who wish to take advantage. Need for firefighter paramedics due to shortage may be contraindicated
Engine Certification Aerial Certification	Moderate	Allow all classifications equal access to the training. However, same concerns for utilization of certification as with job rotations.
Acting Officer Positions	High	Allow equal access to acting officer positions for all members on the promotional eligibility list regardless of classification. May have to hire back firefighter paramedics rather than firefighters in a minority of instances.
Firefighter Overtime	High	Allow equal access to all members who hold the certification for the overtime position being filled. May cause unintended overage of overtime on firefighter paramedics.

		Limited fiscal difference in pay rates.
Utilize only ALS engine companies	Low	Although a potential monetary savings and cure organizational culture; this would have an adverse affect on fire suppression capabilities and potentially offset personnel savings with maintenance costs.
Hiring only firefighter paramedics	Low	City is under severe budget cuts from the State of Florida and can't afford to hire and pay a firefighter paramedic workforce.
Improve participative management	High	Excellent program currently in place. However, place a new emphasis on these quality groups and task forces and recognize the need based on the results of this study. However, must have the administrative flexibility to utilize suggestions.

Discussion

The results of this study have shown a statistically significant problem with the attrition rate for firefighter paramedics as compared with firefighters employed with St. Petersburg Fire & Rescue (SPFR). This study has shown two closely related problems that may have the same underlying causes and contribute to the organization's ability to retain a qualified and ready workforce of firefighter paramedics. The first is a true attrition rate that is considerably higher for the firefighter paramedic group from 1996 to 2007. Second, is the phenomenon of firefighter paramedics voluntarily taking reclassifications, and the corresponding 18% pay reduction, to reclassify as firefighters. What is of particular interest is that these employees are choosing to remain with the organization rather than severing employment and entering the competitive market.

Results for the research questions answered in the *Results* section will be discussed here and presented in the same topical order as the results from the job satisfaction survey. Specifically, discussion is presented for the following key areas as

discovered through the literature review; Communications, Participative Management, Job Enrichment, Organizational Equity, and overall Job Satisfaction. Discussions of all research questions will be housed within the construct of the job satisfaction survey. Only research question number five will be discussed independently. Lastly, the response rate for the job satisfaction survey is not of sufficient size to make inferences about the total population. Firefighter paramedics responded with 33 participants out of 75 and firefighters responded with 19 participants out of a total population of 176. In order for the response to be of sufficient size to make inferences about the total population 63 firefighter paramedics and 123 firefighters are required to respond (Dodge, 2003, p. 300; Issac & Michael, 1997, p. 201).

Survey questions numbered three, four, and five were contained in the key area titled *Communications*. These questions focused on quality communications with supervisors and the dissemination of organizational expectations both at the hiring stage and throughout ones career. The importance of quality communications, and specifically the dissemination of organizational expectations, and the relationship with job satisfaction is strongly supported through the literature (Branham, 2005; Harlow, 1994; Kim, 2002; Wheatley, 2006). Results to survey question three indicated that there is a strong sense of agreement across all classifications that quality communications with supervisors exist. Survey question number four addresses the dissemination of organizational expectations at the time of hiring. Results demonstrate a satisfactory level of agreement across classifications that organization expectations are shared during the hiring phase. The concept that employees leave organizations because it is not what they expected was one of the top seven reasons employees leave organizations (Branham,

2005). Survey question number five addresses the continual sharing of organizational expectations. The firefighter paramedic group disagrees that they are continually apprised of organizational expectations while the firefighter group is in agreement. According to the literature, understanding organizational expectations should have a positive relationship with job satisfaction (Branham, 2005; Harlow, 1994; Kim, 2002; Wheatley, 2006).

In summary, the key area of communications is found to have a relative level of satisfactory agreement across all classifications. Responses are nearly identical with the exception of the continual expression of organizational goals. However, the results of this study have found that there may be a departure from the literature. Consistency with the literature would indicate that a satisfactory level of agreement in communications would also have a satisfactory level of job satisfaction. There is a minimal departure from the literature for firefighters while the firefighter paramedics remain consistent with the literature.

The low response rate inhibits the ability for this author to conduct deeper analysis into potential departures from the literature. For example, firefighter paramedics that are choosing to leave the organization are nearly exclusively in their first ten years of service. This author would have expected a lower level of agreement concerning adequate expression of organizational expectations through the hiring process. The insufficient sample size has prevented further investigation for responses based on tenure. This data would have proved valuable to understand the subtleties of this problem.

The next key area is that of *Participative Management*. This section of the survey includes survey questions numbers six, seven, and eight. These questions focus on

participative management, feeling that employee input is valued, and demonstrated changes based on employee input. The concept and use of participatory management is found to have a direct and positive relationship with employee attitudes, motivation, and job satisfaction (Bobrowitz, 2001; Hays & Kearney, 1995; Kim, 2002; Shafritz & Russell, 2005; Traut et al., 2000).

Results from this section of the job satisfaction survey provided nearly identical perceptions across all classifications. There is a level of disagreement for the use of participatory management and if employee input is valued by the organization. Concerning survey question eight, both classifications provide a level of strong disagreement to the statement that "organizational decisions and/or changes are made based on input from me".

In summary, results from the section titled *Participative Management* are consistent with the literature. There is a demonstrated level of either disagreement or strong disagreement concerning the use of participatory management and also a level of dissatisfaction for overall job satisfaction. The nearly identical responses from both classifications provide more questions than answers. The conclusion that there is a direct positive relationship with participative management and job satisfaction is supported by the literature (Bobrowitz, 2001; Hays & Kearney, 1995; Kim, 2002; Shafritz & Russell, 2005; Traut et al., 2000). However, this study has discovered that this issue is complex. If both classifications are less than satisfied with the level of participatory management within the organization and both are less than satisfied with their overall job satisfaction, then why are only firefighter paramedics suffering a statistically significantly higher attrition rate? It is evident to this author that job satisfaction alone may be insufficiently

evidential to address the complexity of this problem. It is this author's opinion that the cumulative effects of subtle and incremental differences over the key areas identified have a synergistic effect causing employee retention challenges for firefighter paramedics.

The next key area is that of *Job Enrichment*. The concept of job enrichment includes subtopics such as job rotation, continual learning, job variety, cross-training, and job development. Job enrichment is the leading contributor to the literature found concerning job satisfaction by this literature review. This section includes survey questions numbered nine, ten, eleven, and twelve. These questions focus on the concepts of empowerment, feeling part of the big picture, learning new skills, and job rotation.

The literature suggests a positive relationship between learning of new skills, cross-training, job development, tasks performed, job variety, and overall job satisfaction (Bobrowitz, 2001; Branham, 2005; Buelens & Van den Broeck, 2007; Hays & Kearney, 1995; Kim, 2002; Newstrom & Davis, 1997; Shafritz & Russell, 2005; G. Steiner & J. Steiner, 2000; Traut et al., 2000). The results of the job satisfaction survey revealed that there is a marginal level of agreement concerning empowerment across all classifications. This would be a minimal departure from the literature if examined without any other context in relation to overall job satisfaction. Although firefighter paramedics have a stronger disagreement with "feeling part of the big picture" than firefighters, both groups disagree that they are a part of the big picture. When examining the perceived opportunity to learn new skills, survey question 11, there is a significant difference in responses from the firefighter paramedic group as compared to the firefighters. This was found to be sufficiently distant to be statistically significant at a 95% confidence level.

Firefighter paramedics disagreed that they had the opportunity to learn new skills while the firefighters agreed. These scores are 2.3 and 3.5 for firefighter paramedic and firefighter, respectively. Similarly responses to opportunities for job rotation revealed that firefighter paramedics strongly disagree that they have job rotation opportunities as firefighters disagree at a level (2.6) approaching agreement. This is not found to be at a level of statistical significance.

In summary, the section titled *Job Enrichment* found that there is a significant departure in perceptions across classifications. Questions concerning empowerment and being part of the big picture were relatively consistent across both classifications. Examination of empowerment alone would demonstrate a marginal departure from the literature as the level of empowerment is agreeable and the overall job satisfaction is found in the disagree level. Feeling part of the big picture is consistent across classifications at a level of disagreement and is consistent with the literature when evaluating its relationship to overall job satisfaction. Job enrichment activities such as learning new skills and job rotation are found to have significant differences between the firefighter paramedic group and the firefighter group.

Results concerning the opportunity to learn new skills or jobs were found to be statistically significant and were expected. Historically, SPFR does not afford the same opportunities for training and development across classifications. This author does not suggest punitive or arbitrary and capricious actions towards the firefighter paramedic group, but rather a matter of function. Two questions highlight limiting factors when evaluate this topic. First, what is the fiscal cost for training employees that are not able to use these skills in their current job position? Second, what is the cost to employee morale

to be trained in areas that they are functionally prohibited from practicing? These questions will be discussed further in answering research question number five.

Results concerning the opportunity to rate jobs is found to range from strongly disagree for firefighter paramedics to marginally disagree for firefighters. It is interesting to note that these responses are not statistically significantly distant from each other across classifications. The author expected the responses by the firefighter paramedic group but fell short of predicting firefighter responses. At this time, the author does not have an explanation for the level of disagreement among the firefighter group in this particular survey question. Additional discussion will be provided on this topic in the next key area. Over the entire section the firefighter paramedic group is in disagreement with their perceived level of job enrichment opportunities while the firefighter's average score for the section is in relative agreement. The level of disagreement found within the job enrichment section is consistent with the literature when compared to the overall level of job satisfaction for firefighter paramedics and marginally distant for the firefighter group (Bobrowitz, 2001; Branham, 2005; Buelens & Van den Broeck, 2007; Hays & Kearney, 1995; Kim, 2002; Newstrom & Davis, 1997; Shafritz & Russell, 2005; G. Steiner & J. Steiner, 2000; Traut et al., 2000).

The next key area is titled *Organizational Equity*. This section consisted of two multifaceted questions that identified the perceived access to organizational benchmarks in survey question 13 and then asks respondents to provide their relative level of importance to general topics found in the literature review to be of significance to the issue of job satisfaction in survey question 14.

The concept of organizational equity, or equal access, is pervasive in the literature

concerning employee job satisfaction. Specifically, the need for membership and a demonstrated sense of community is reported to have a direct positive relationship with employee satisfaction (Moynihan & Pandey, 2007; Newstrom & Davis, 1997; Wheatley, 2006). Additionally, it is found that classes of employees and employee isolation have a detrimental effect on job satisfaction, retention, and absenteeism (Conger, 1998; Newstrom & Davis, 1997; Wheatley, 2006). Specifically, Newstrom and Davis (1997) explain that employee isolation causes employees to lose their higher order needs such as social needs. Authors also suggest reducing the number of job categories or classes (Shafritz & Russell, 2005; Wheatley, 2006). The concept of organizational equity or fairness is demonstrated by a direct correlation to job satisfaction and employee retention (Erich, 2006; Kim, 2002; Rand, 2007). Rand's (2007) definition of distributive justice is an excellent overview of the concept of equality. Distributive justice is the fairness in the distribution of rights or resources within an organization (Rand, 2007, p. 16). Inequality is best summarized by the quote "feeling like second class citizens" when discussion the challenges with EMS in the Washington, DC Fire Department (Erich, 2006).

Results for survey question 13 revealed that Firefighter paramedics agreed that they had equal access to swamp time, mentoring and promotions; disagreed with their access to acting officer positions; and strongly disagreed with their access to firefighter overtime, driving rotations, and engine and aerial certifications. Firefighters agreed that they had equal access to swap time, mentoring, engine certification, and acting officer positions; marginally disagreed with their access to aerial certifications and driving rotations; and substantially disagreed with their access to firefighter overtime. Overall, the perception of equality is in the level of disagree across all classifications with the

exception of swap time and mentorship. The only aggregate topic that is reported in the strongly disagree rating is driving rotations. This finding is in concert with the literature.

Results for survey question 14 revealed that Respondents from the firefighter paramedic group identified quality communications, being part of the big picture, participative management, an opportunity to learn new jobs or skills, and equal access to all aspects of the organization as the top five responses in their order of importance. These are followed by job rotation, organization expectations, and empowerment.

Respondents from the firefighter group identified quality communications, being part of the big picture, participative management, an opportunity to learn new skills or jobs, and empowerment as the top five responses in their order of importance. These are followed by understanding organizational expectations, job rotation, and lastly equal access to all aspects of the organization. The top four responses are identical across both classifications.

In summary, the section titled *Organizational Equity* revealed that there is a separation in perceived organizational equality for the firefighter paramedics in comparison to the firefighters. Firefighter paramedics strongly disagree with the ideal that they have equal access to driver engineer certification, aerial operator certification, driving rotations, and firefighter overtime. In addition, firefighter paramedics are dissatisfied with their opportunities for acting officer positions. The only area that the firefighter group was significantly dissatisfied is that of access to firefighter overtime. The single topical area provided in this key area that had a statistically significant relationship to overall job satisfaction is that of equal access to promotions; an area that both groups are in similar agreement that they have equal access.

It is interesting to note that equal access throughout the organization is of high value for firefighter paramedics and of the least value to the firefighter group. This finding may be due to the law of diminishing returns. For example, since the firefighter group has a designed access to all aspects of the organization, it is of lesser importance to them.

The significance of the findings in this section to the organization is that there is evidence that members of the firefighter paramedic group have limited access to many aspects of the organization. This isolation and lack of job enrichment and organizational equity may contribute to the overall dissatisfaction for this group as described in the literature (Conger, 1998; Newstrom & Davis, 1997; Wheatley, 2006). Unexpected responses by the firefighter group have rendered statistical significance unobtainable in most areas. Generally, all results are consistent with the literature with few marginal exceptions experienced by the firefighter group. The overall general malaise concerning morale within the organization may have influenced both the rate of participation as well as skewed responses.

It is this author's opinion that the inequities between classifications demonstrated by this study may contribute significantly to overall job satisfaction and ultimately employee retention or attrition rates as suggested by the literature. This assumption is grounded in the fact that the desires of both classifications are synonymous for the first four topical categories of quality communications, being part of the big picture, participative management, and opportunity to learn new skills or jobs. For example, firefighters are desirous of these factors (question 13) and agree that they have equal access (question 14) and are not experiencing a retention problem, but do have a general

job dissatisfaction. This assumption is further supported by the fact that firefighter paramedics are voluntarily reclassifying themselves to this classification and remain with the organization. Therefore, the general lack of job satisfaction for firefighters may be more heavily influenced by other factors such as budget cuts and protracted union negotiations than the firefighter paramedic group. In other words, we want what we don't have.

When discussing the firefighter paramedic group, synonymous desires (question 13) are presented as well as a strong disagreement with equal access (question 14) and distributive justice as presented in the literature (Erich, 2006; Kim, 2002; Rand, 2007). Consistent with the literature this disagreement is met with job dissatisfaction, yet not statistically distant from the firefighter group. Once again, other influences may have a contributory effect to the overall job satisfaction. Overall job satisfaction is measured by this survey as an independent rating and not a cumulative result of all other questions. The opportunity exists for disparity between finite subject matters and the overall gut feeling for job satisfaction. Therefore, for further analysis, it is suggested that more emphasis is placed on topical ratings in each key area than on the overall levels of job satisfaction that are potentially more susceptible to outside influences affecting morale.

The last key area is that of *Job Satisfaction*. This area consisted of one question for overall job satisfaction. This question solicits a perceived summary statement for overall job satisfaction at the conclusion of the job satisfaction survey. It is found that for all respondents overall job satisfaction is one of dissatisfaction. Both groups performed uniformly on this question.

Responses for both classifications report a marginal level of dissatisfaction yet

only one classification is experiencing retention problems. In addition, several data points throughout the job satisfaction survey demonstrated relative differences with lower levels of agreement from the firefighter paramedics in comparison to the firefighters. Further analyses were conducted in an attempt to identify causes for the discrepancy. An ANOVA table created by SPSS demonstrated that there is a statistically significant difference in overall responses from the firefighter paramedics as compared to the firefighters for questions 1 – 12, and 15.

The significance of this finding is that the overall perception of firefighter paramedics is one of less agreement, or satisfaction, over the entire survey instrument. The real value in this finding is that with greater than 95% certainty it can be stated that firefighter paramedics have less job satisfaction when considering all responses in the survey. Further analysis determined that only questions seven and eight (participatory management) were statistically significantly correlated with perceived job satisfaction.

Several explanations for these findings are found in the literature. First, the fact that overall there is a statistically significant difference in responses between classifications when few specific topics or questions passed the rigors of scientific and academic standards may be evidence that the cumulative effects of marginal differences have an overall synergistic effect in job satisfaction and ultimately employee retention. This concept is supported by Newstrom and Davis (1997) as they point out that declining attitudes and levels of job satisfaction are often both a current symptom of an underlying problem and a potential cause of a problem in the future (p. 254). The problem is evidenced in the demonstrated attrition rates for firefighter paramedics. Second, an explanation for the relatively uniform response for overall job satisfaction across

classifications may be explained by the fact that it is found that firefighters are motivated and thus satisfied with the job itself (Lee & Olshfski, 2002; Skibba, 2002).

A brief discussion of firefighter paramedics taking voluntary reclassifications is now appropriate. A firefighter paramedic with SPFR earns a positive 18% differential in pay over the classification of firefighter. In the state of Florida, certifications for firefighter and paramedic are state level certifications and therefore have portability within the state. It is empirically held that there is a shortage of paramedics in Florida. Functionally, any firefighter paramedic that is experiencing such dissatisfaction with working conditions at SPFR could easily obtain employment with another agency. Generally, this is what is occurring with newer firefighter paramedics. However, when a firefighter paramedic chooses to no longer function in that capacity they may accept a voluntary reclassification to firefighter. When this occurs the individual receive an 18% reduction in pensionable salary.

Therefore, if overall job satisfaction is uniform across classifications; why would an individual suffer such dissatisfaction and remain with the organization in a similar state of dissatisfaction? The literature does not support this concept. It is this author's opinion that organizational culture concerning the treatment of firefighter paramedics is the causal factor. Culture is difficult to measure and is woven throughout many of the concepts and questions presented in the job satisfaction survey. For example, the lack of opportunity for learning new skills or jobs such as engine or aerial operator demonstrate the organization's culture in how it utilizes firefighter paramedics. The limiting factor for firefighter paramedics on acting officer positions also surfaces the organizational culture. The literature reports that public sector employees are more motivated by culture than

money; a point demonstrated by voluntary reclassifications (Buelens & Van den Broeck, 2007). The literature also reports that the willingness to serve in dual roles depends on the organizational culture and the workload (ICMA, 1998). The concept of increased workload has been silent thus far. It is found that there is an inverse relationship with job demands and job satisfaction (Saltzstein et al, 2001). For example, as the job demands increase the job satisfaction decreases. This is of particular interest when discussion the firefighter paramedic classification. This group shoulders 86% of the responsibility for all responses. This workload (job demand) may play a significant role when combined with perceptions of inequity and isolation.

In summary, it is this author's opinion that the specialization of the firefighter paramedic within SPFR has created an isolated minority class of employees with the highest workload. This isolation limits organizational equity in a variety of methodologies as reported in this study. It is well documented that isolated employees have lower job satisfaction, high turnover, and high absenteeism (Conger, 1998; Newstrom & Davis, 1997; Wheatley, 2006). It is important to note that this isolation has developed as a matter of function over the years and has become part of the culture at SPFR rather than a punitive or arbitrary and capricious act.

Several potential solutions are discussed as to their degree of feasibility in an effort to answer research question number five. These suggestions were summarized and presented in Table 51. The majority of suggestions are focused on breaking down barriers that may contribute to feelings of isolation for the firefighter paramedics. Adoption of these suggestions would break down walls and demonstrate a shift in organizational culture where firefighter paramedics are concerned. These are not offered

in any particular order of importance.

Job rotation, such as driving rotations, is one method to provide job enrichment, equity, and variety. This received a feasibility rating of low due to the fact that it is not statistically supported for universal application and that the overall paramedic shortage may necessitate that firefighter paramedic's function on the ALS units.

Equal access to engine and aerial certification courses is another method to provide job enrichment, equity, and cross-training. It is suggested that all classifications are provided equal access to the training. This received a feasibility rating of moderate due to concerns for utilization of certifications once completed. If firefighter paramedics are provided the training and then isolated from utilizing it, it may be counterproductive and have the same cultural implication as isolation.

Equal access to acting officer positions by all members on the promotional eligibility list is another method to provide job enrichment, equity, and variety. This suggestion received a feasibility rating of high. There is minimal fiscal cost to this suggestion for there are occurrences when firefighter paramedics will have to be hired back on overtime to accommodate the assignment. However, there is also the potential for some firefighter paramedics to have a degree of disapproval with this action as it will cause overtime liabilities that were not previously present. This concept is supported in the literature by Newstrom and Davis (1997) that point out that not all employees will choose to be enriched (p. 294). Therefore, status quo employees may have to participate more fully in the organization against their desires in order to accommodate those who seek job enrichment activities.

Allow equal access to all overtime for which a person currently holds the

certification. This suggestion received a feasibility rating of high. Once again, the adverse effect is that firefighter paramedics would be subject to mandatory overtime, when it is their turn, on both the firefighter and the firefighter paramedic lists. It is important that firefighter paramedics that obtain firefighter overtime positions are not placed on ALS units that would not have been filled by firefighters previously.

In summary, the single underlying issue with each suggestion is that there are not enough firefighter paramedics available. The critical implication to the organization is that the one suggestion of hiring only firefighter paramedics in the future will begin to turn the organizational culture, break down classes, and provide uniform organizational equity to all personnel. All concepts of job rotation, job enrichment, and job variety would be negated in one action. However, this received a low feasibility rating due to budget constraints.

Implementation of these and / or other similar concepts that support breaking down barriers to inclusion for the firefighter paramedics will likely result in increased retention rates and decrease instances of firefighter paramedics voluntarily reclassifying to firefighter positions. In addition, a change in organizational culture may spur current firefighters to voluntary seek paramedic certifications.

Recommendations

St. Petersburg Fire & Rescue is experiencing a statistically significant retention problem within the firefighter paramedic classification. The purpose of this study is to critically analyze current levels of job satisfaction for firefighter paramedics employed by St. Petersburg Fire & Rescue and to make recommendations for improved retention. The following recommendations are a direct result of the findings of this study.

1. It is recommended that a labor-management strategic planning task force is assembled by March 31, 2008 consisting of the Fire Chief, Assistant Chief of Operations, Rescue Chief, Rescue Division, and a diverse sample of approximately 20 firefighters and firefighter paramedics.

It is suggested that this cross-sectional group is tasked with evaluating all suggestions for positive, negative, and unintended benefits prior to implementation. This will also assist in using participative management as supported in the literature.

2. It is recommended that the organization only hire firefighter paramedics starting January 1, 2009.
3. It is recommended that firefighter paramedics are afforded equal access to all aspects of the organization, such as:
    a. Driver Engineer Training
    b. Aerial Operator Training
    c. Firefighter Overtime
    d. Acting Officer Positions
    e. Job Rotations

Implementation should be determined as a result of the labor-management strategic planning session after March 31, 2008.

4. It is recommended that future research is conducted at a time that may be less influenced by other influences to overall job satisfaction.
5. It is recommended that future research is conducted post hoc to evaluate the effects and changes in organizational culture, job satisfaction, and attrition rates.

6. It is recommended that future researches conduct broad research across many organizations in an effort to identify a workable national model for agencies that provide fire based EMS.

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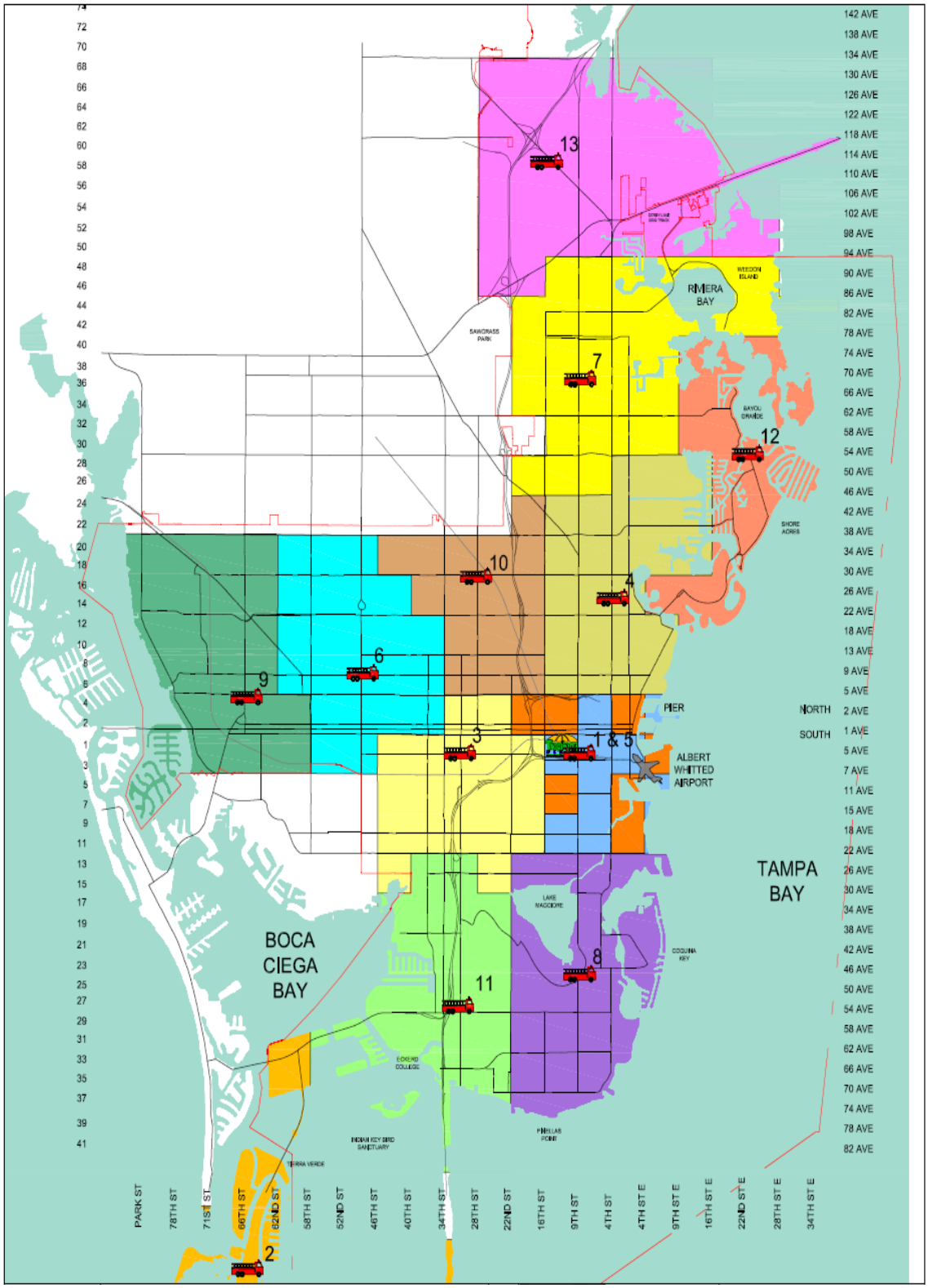
Appendix A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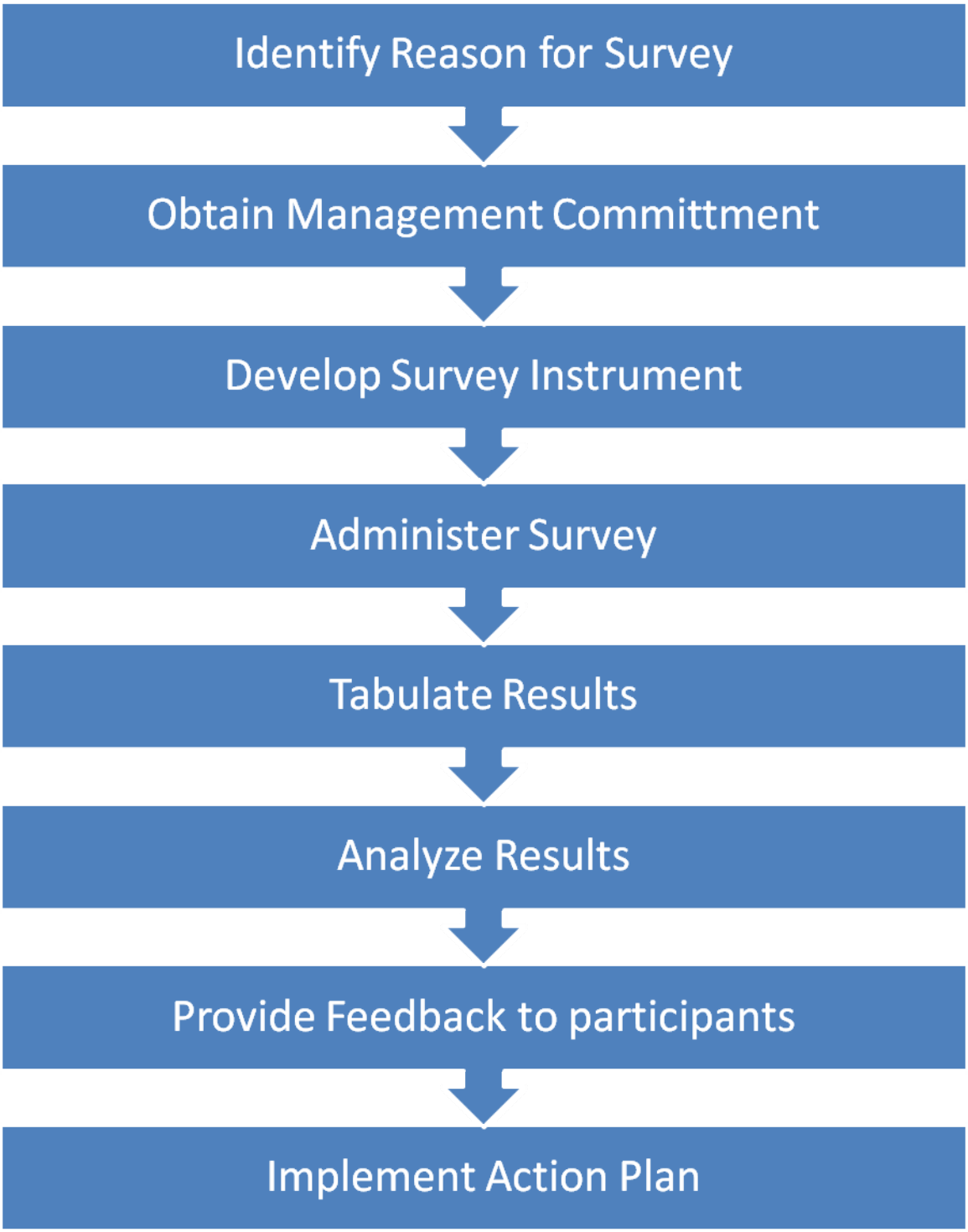
Appendix B



(Newstrom & Davis, 1997, p. 268)

Appendix C

Job Satisfaction

1. Default Section

1. Please mark your classification.

◯ Firefighter or Firefighter EMT ◯ Firefighter Paramedic

2. Please mark the most appropriate answer for your years of service with St. Petersburg Fire & Rescue.

◯ 0-5 years
◯ 6-10 years
◯ 11-15 years
◯ 16-20 years
◯ 20+ years

2. Communications

3. I have good communications with my supervisor.

	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree
1	◯	◯	◯	◯	◯

4. Organizational expectations were clearly communicated to me when I was hired.

	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree
1	◯	◯	◯	◯	◯

5. Organizational expectations are clearly communicated to me regularly.

	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree
1	◯	◯	◯	◯	◯

3. Participative Management

6. I am afforded an opportunity to participate in making decisions that affect me.

	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree
1	◯	◯	◯	◯	◯

7. I feel that my input is valued by the organization.

	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree
1	◯	◯	◯	◯	◯

8. Organizational decisions and / or changes are made based on input from me.

	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree
1	◯	◯	◯	◯	◯

4. Job Enrichment

9. I am empowered to make decisions independently when appropriate.

	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree
1	◯	◯	◯	◯	◯

Job Satisfaction

10. I feel that I am part of the big picture.

	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree
1	◯	◯	◯	◯	◯

11. I have the opportunity to learn new skills or jobs.

	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree
1	◯	◯	◯	◯	◯

12. I have the opportunity to rotate jobs regularly.

	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree
1	◯	◯	◯	◯	◯

5. Organizational Equity

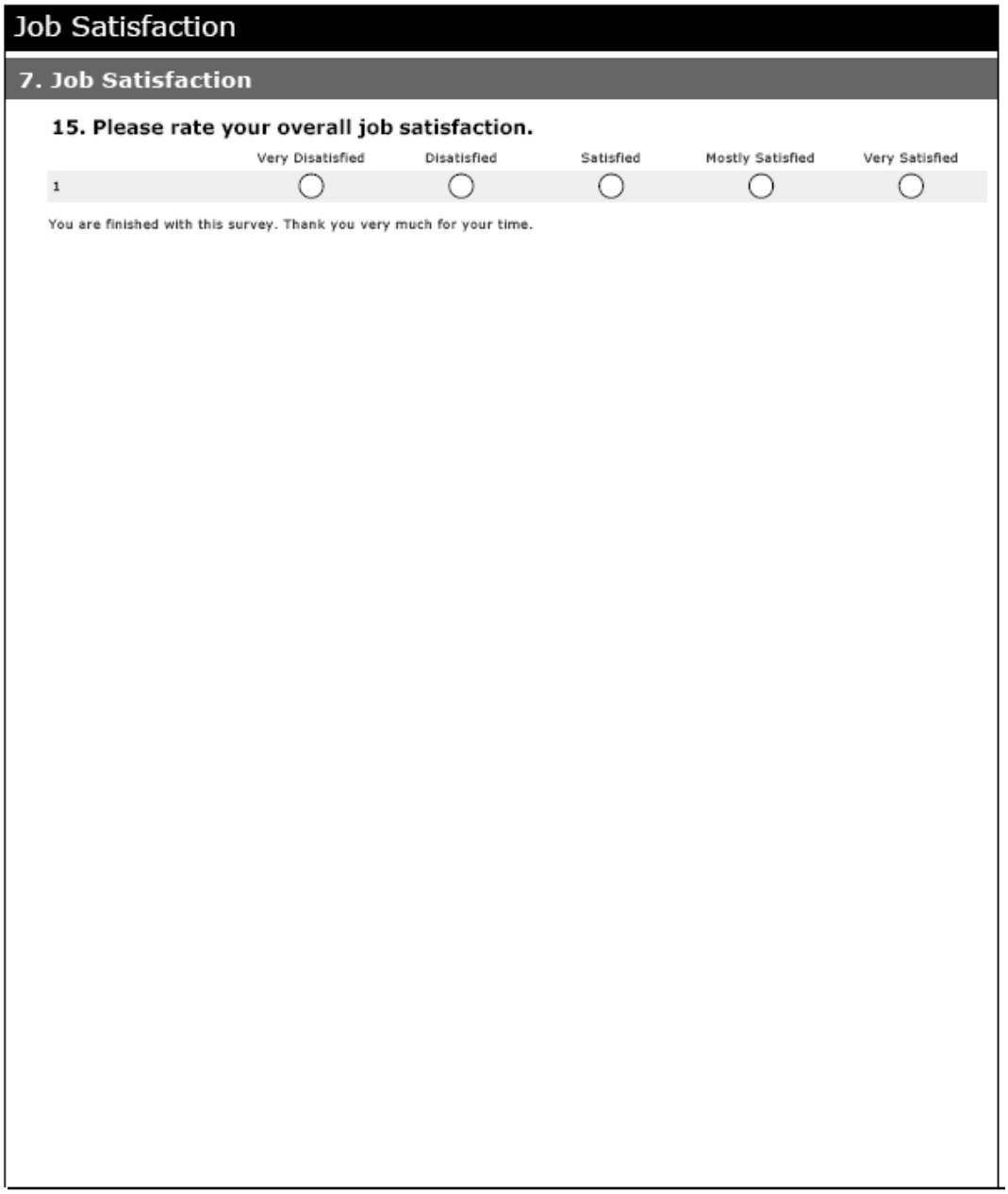
13. I have equal opportunity and access to the following:

	Strongly Disagree	Disagree	Agree	Mostly Agree	Strongly Agree
Mentoring	◯	◯	◯	◯	◯
Swap Time	◯	◯	◯	◯	◯
Driving Engineer Certification	◯	◯	◯	◯	◯
Aerial Operator Certification	◯	◯	◯	◯	◯
Driving Rotations	◯	◯	◯	◯	◯
Acting Officer Positions	◯	◯	◯	◯	◯
Firefighter Overtime	◯	◯	◯	◯	◯
Promotions	◯	◯	◯	◯	◯

6. Organizational Equity (continued)

14. Please rank the following in order of importance to you. For example, a (1) would be of most importance to you.

	1	2	3	4	5	6	7	8
Quality Communications	◯	◯	◯	◯	◯	◯	◯	◯
Understanding Organizational Expectations	◯	◯	◯	◯	◯	◯	◯	◯
Participating in Management Decisions	◯	◯	◯	◯	◯	◯	◯	◯
Empowerment	◯	◯	◯	◯	◯	◯	◯	◯
Being Part of the Big Picture	◯	◯	◯	◯	◯	◯	◯	◯
Opportunity to learn new skills or jobs	◯	◯	◯	◯	◯	◯	◯	◯
Opportunity to rotate jobs regularly	◯	◯	◯	◯	◯	◯	◯	◯
Equal Access to all aspects of the job	◯	◯	◯	◯	◯	◯	◯	◯



Job Satisfaction

7. Job Satisfaction

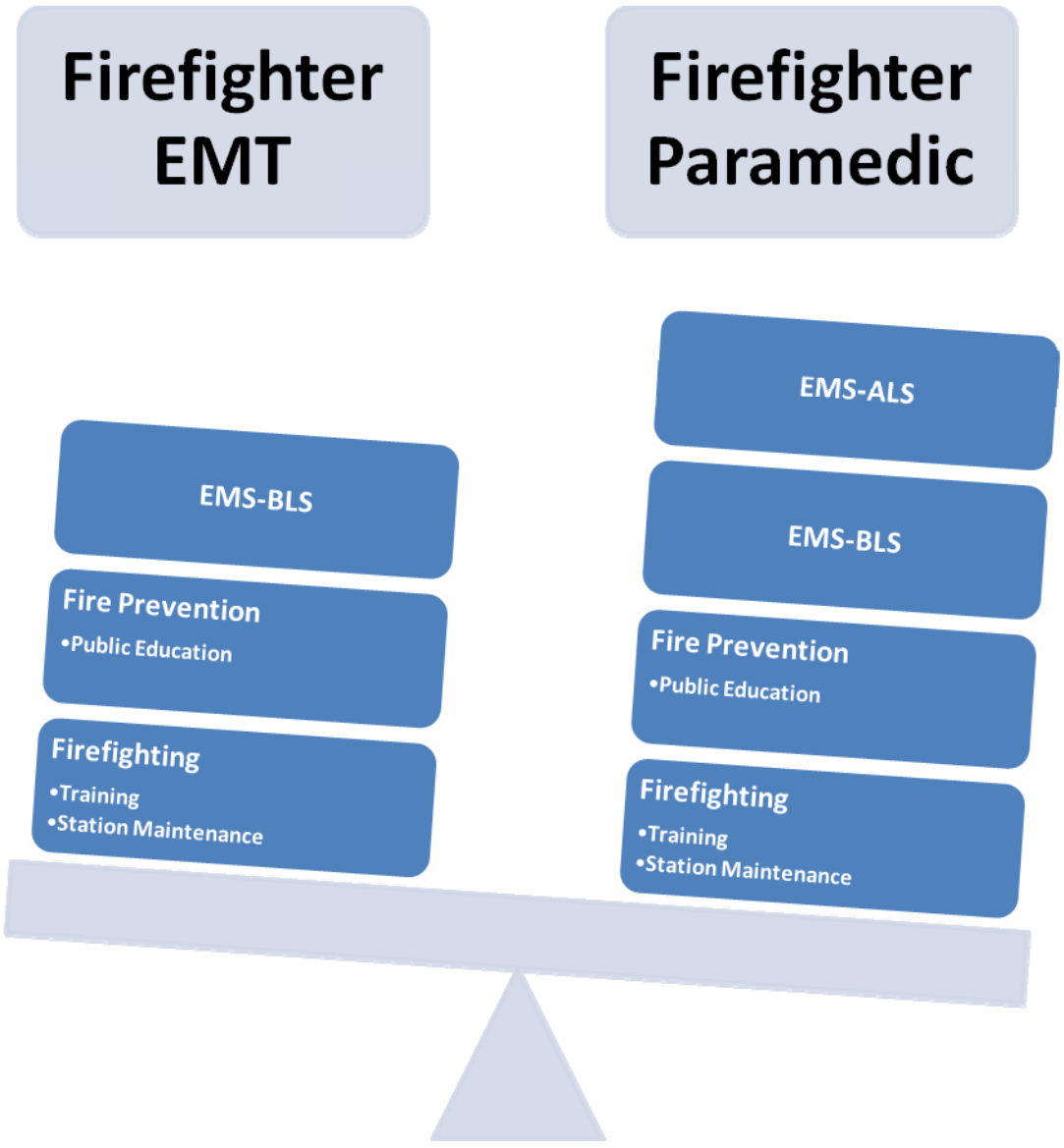
15. Please rate your overall job satisfaction.

	Very Disatisfied	Disatisfied	Satisfied	Mostly Satisfied	Very Satisfied
1	◯	◯	◯	◯	◯

You are finished with this survey. Thank you very much for your time.

Appendix D

Organizational Design



Appendix E

Organizational Culture