EVALUATION OF BEHAVIOR INTERPRETATION INSTRUMENTS USED DURING EMPLOYMENT SCREENING INTERVIEWS

EXECUTIVE DEVELOPMENT

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ABSTRACT

The author conducted evaluative research in order to identify psychological assessment instruments that associate personality and behavior traits with the expectations of a great firefighter. The author reviewed the existing current literature and conducted a survey of fire departments nationwide in order to identify (a) what instruments are in general use for screening employees, (b) what instruments fire departments are using, (c) the desirable traits of a great employee, (d) an instrument that the Carlsbad Fire Department might use, and (e) the legal issues that impact psychological screening. The problem was that hiring decisions based upon unstructured interviews, or upon screening methods not validated, exposed the Carlsbad Fire Department to accusations of adverse impact. These bad decisions could result in wasted time and money trying to correct, discipline, and train an unsuitable firefighter. The author identified instruments commonly used for screening applicants that were more suitable as employee development tools than for entry level screening, but also identified instruments that appeared suitable for correlating personality and behavior traits with the expectations of a great firefighter. The author recommended further evaluation of the identified instruments and experimentation with several specific instruments during the screening process of firefighter applicants. The specific instruments that were identified for further evaluation and experimentation were the Behavior Interpreter and the Interview Assistant from PsyConsultants, Inc., and a project currently under development by James Tracy, Ph.D. and Mike Roberts, Ph.D.

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INTRODUCTION

Hiring the wrong person is a waste of fire department money. A bad employee may adversely affect (a) the department morale, (b) the department's public image, and (c) the safety of all personnel. An employee may absorb information and develop the necessary skills to be a qualified firefighter, but "Personality traits are characteristic behavior patterns that are stable and enduring" (Kamp and Krause, 1997, p. 24).

The problem is that the Carlsbad Fire Department lacks an interview technique for entry level candidates that, during the selection process, identifies the personality and behavior traits consistent with our expectations of a great employee.

The purpose of this Applied Research Project is to explore instruments for use during the interview of entry level candidates. The author desires to identify an instrument that correlates personality and behavior traits with our expectations of a great employee.

The author shall answer the following questions:

1. What interview instruments are currently available to use for screening entry level candidates?
2. What interview instruments are fire departments currently using to screen entry level candidates?
3. What are the desirable personality and behavior traits of a great employee?
4. Does an instrument exist that the Carlsbad Fire Department can customize and use to correlate personality and behavior traits consistent with its expectations of a great employee?

5. What are the legal ramifications that must be considered when using behavioral interpretation instruments in employee selection?

BACKGROUND AND SIGNIFICANCE

The Carlsbad Fire Department conducts training for newly hired firefighters traditionally referred to as “rookies”. This training consists of (a) education and skills practice in the basic requirements of firefighting, (b) review of requisite knowledge and skills for the rookie’s specific level of Emergency Medical Technician licensure, and (c) education in the Carlsbad Fire Department’s Tactical Guidelines.

The Carlsbad Fire Department (CFD) does not require pre-employment training, certification or experience as a firefighter but does require a candidate to have a current Emergency Medical Technician-Intermediate or higher license. The CFD conducts all firefighter education and training after hiring the candidate.

The roles of a fire department are many. Fire departments must provide services to the public that require education and training in a wide variety of disciplines. Some of these are (a) hazardous materials, (b) water rescue, (c) mountain rescue, (d) aircraft rescue and firefighting, (e) cave rescue, (f) industrial firefighting and rescue, (g) confined space entry, and (h) various combinations of the above listed disciplines. A fire department cannot expect applicants to arrive upon its doorstep with certifications of education and training in all these disciplines.

The United States Department of Labor through the research of the Social Policy Research Associates identified aptitude and desire to learn as important qualities to assess in prospective employees (Kogan, Wolff, and Russell, 1995). Based upon Kogan’s article, the author’s opinion is that fire departments should screen applicants for (a)

attitude, (b) aptitude, (c) motivation, (d) energy, (e) desire, and (f) capacity to learn. These qualities will facilitate ensuing education and training in the various requisite skills of the modern firefighter.

A qualified firefighter may not necessarily be a stable firefighter. Psychological health is as important as physical health. The communal environment in which firefighters live and work and the repeated exposure of firefighters to extraordinary and horrific events generate stress.

> The stressful nature of the firefighting profession continues to be validated. The Washington Post, in an article that appeared in the November 9, 1997, edition, reported on the 25 most stressful occupations as listed in Jobs Rated Almanac, a publication of National Business Employment Weekly. Fire fighter was listed as the second most stressful occupation, with the U.S. President being first. According to the article, the job of fire fighter is more stressful than other occupations, such as surgeon (ranked sixth), police officer (ranked eighth), air traffic controller (ranked tenth) and stockbroker (ranked twentieth). Emergency medical technician was ranked twenty-fourth (p. H5). In an October 1994 article in Firehouse Magazine, Lewis reports that, at that time, Jobs Rated Almanac ranked fire fighting as the most stressful job in the United States (p. 58). (Henry, 1998, p. 5)

The effects of untreated stress can be as drastic as (a) violence in the workplace, (b) career change, and tragically (c) suicide. Approximately 15-20% of firefighters are at risk of adverse effects from stress (Carlisle, 1999).

Personality traits and patterns of behavior determine the effect of stressors upon firefighters (Henry, 1998). Individual differences between personalities and behavior patterns of firefighters determine how intensely the firefighter may react to traumatic situations and the duration of the effects (Regehr, Hill, and Glaney, 2000). It behooves us to explore methods that will screen firefighter applicants for personality traits and patterns of behavior that identify persons who become great employees and will cope effectively with the stresses of the firefighting career. The author's desire is to have all Carlsbad Fire Department personnel retire in good physical and psychological health.

The number of complaints filed by emergency first responders against property owners for physical and psychological injuries sustained during emergency response to incidents is increasing. The states of Florida, Minnesota and New Jersey have statutorily overturned the Fireman's Rule. Colorado, Oregon and Pennsylvania have overturned the Fireman's Rule by decision. This rule continues to be challenged in numerous states (*Farmer v. B & G Food Enterprises Inc.*, 2002).

The Fireman's Rule is common law that precludes an emergency responder from holding a property owner liable for injuries sustained while responding to an emergency on the owner's property (Lynch, 2000). In the author's opinion these litigations erode the respect of the public for the commitment, dedication, and motivation of emergency first responders worldwide.

A unique litigation is currently under way. The lawsuit is based upon the personal injury complaint of twenty four volunteer and career firefighters and Emergency Medical Technicians. The complaint relates to a high pressure natural gas pipeline explosion that killed 12 members of an extended family during a weekend outing at a site along a

remote section of the Pecos River in southeastern New Mexico near Carlsbad. The date of the complaint is June 11, 2003 and contains this language:

> As to each plaintiff, it was a searing, traumatizing experience that has resulted in severe pain, anguish, and emotional distress. … The trauma, injury, and emotional distress is continuing in nature, has been manifested by physical symptomatology, has impacted their personal lives, has resulted in recurrent nightmares and flashbacks, has been debilitating, and has been traumatizing. (*Baldonado, et al*., 2003, p. 24)

This litigation is unique and probative. The plaintiffs' attorneys are attempting to change New Mexico tort law to include "Negligent Infliction of Emotional Distress" (*Baldonado, et al.,* 2003, p. 37) as a cause of action. The outcome of this litigation is important to the Carlsbad Fire Department because (a) 11 plaintiffs are either current or former employees of the Carlsbad Fire Department, and (b) it may require significant changes in the pre-employment screening and the post employment medical evaluation processes of the Carlsbad Fire Department.

One of the United States Fire Administration's 5-Year Operational Objectives is to appropriately respond in a timely manner to emergent issues (United States Fire Administration, n.d.). This litigation and its potential effects are emergent issues that require timely and appropriate response from the fire service in general and the Carlsbad Fire Department in particular. Personal injury claims by fire department personnel against the very customers who pay their salaries and rely upon them for protection and aid in the time of distress erode the public confidence in the fire service and cause the privatization demon to rear its ugly head among local and state legislators who would eliminate the

embarrassment at its source. An appropriate response by the Carlsbad Fire Department and fire departments nationwide is to look more closely and seriously at psychological evaluations of prospective employees and future executive officers. The National Fire Academy Executive Development course has a course goal to "Develop and integrate management and leadership techniques necessary in complex organizations" (National Fire Academy, 1998, p. SM 0-3). The evaluation, selection and implementation of a psychological assessment instrument for screening recruits and officer candidates is a step toward identifying individuals with the management and leadership techniques required in modern fire services.

Regehr (2000) relates that emotional response to disturbing scenes and to events is normal, but individual behavioral patterns and personality traits will vary the severity of response. Emotional response to disturbing scenes demonstrates the concern and sensitivity to human suffering that characterizes emergency responders. These very traits are the motivators that draw them to the fire service. Should it be any other way? Should first responders be uncaring and insensitive caregivers for our loved ones, or for ourselves? This begs the questions: (a) What personality traits and behavioral patterns indicate an individual's capability to recover with full functionality from emotionally traumatic events? and (b) What personality traits and behavioral patterns signal a candidate's disposition toward debilitating effects of critical incident stress and post traumatic stress disorder?

In June of 2000, Regehr et. al. partially answers these questions by stating, "Individuals with feelings of insecurity, lack of personal control, and alienation from others are more likely to experience higher levels of distress" (p. 338). Firefighters and

Emergency Medical Technicians assume the risk of exposure to horrific events when they seek employment in the field of first line emergency response. Psychological testing of candidates should identify those who are susceptible to irrevocable damage from the effects of horrific scenes.

The adverse impact upon the fire service resulting from emergency responder litigation against property owners, and the costs of (a) workers' compensation claims, (b) overtime paid to cover for the affected employee during treatment and counseling, and (c) employee assistance and other mental health programs beg interdiction by an instrument capable of identifying candidates who may be susceptible to the adverse effects of critical incident stress.

The author desires to continuously improve the quality of emergency services the Carlsbad Fire Department (CFD) provides to the community. In order to do this, the CFD must constantly strive to increase its efficiency and its skill. Hiring great employees is a critical step in continuous improvement, and a valid assessment instrument is an important tool for identifying potentially great employees.

LITERATURE REVIEW

EXISTING ASSESSMENT INSTRUMENTS

The purpose of this subsection of the literature review is to identify a number of assessment instruments that psychologists currently use to interpret behavior and personality traits for employment screening.

The most popular instrument used by psychologists for screening candidates, regardless of the job description, is the Minnesota Multiphasic Personality Inventory (MMPI). The MMPI is a written instrument consisting of 566 true-false items.

Psychologists use MMPI results to compare an applicant to the general population in order to identify personality and behavioral problems (Hathaway & McKinley, Rev. 1967).

The Myers-Briggs Type Indicator (MBTI) is another popular assessment tool used to identify personality types and to predict behavior. The MBTI is a useful tool to aid existing agencies improve the leadership and communications skills of employees (Platts, 2000). The MBTI is a 166 item multiple choice test that identifies 16 quintessential personality types (Myers & McCaulley, 1985).

The California Psychological Inventory (CPI) is a complex instrument gaining popularity in, obviously, California. It is a 434 item written instrument that measures a broad spectrum of variables (Gough & Bradley, 1996).

The Cattell 16 Personality Factor Questionnaire (16PF) is a 187 item written instrument that scores for 16 different personality factors (Cattell, 1979).

The Fundamental Interpersonal Relations Orientation – Behavior (FIRO-B) is a 54 item questionnaire that evaluates a subject's interpersonal interactions. The FIRO-B uses six scales in various areas to describe the subject's behavior as expressed toward others, and the behavior the subject wants others to express towards him or her (Schutz, 1967).

The Strong Vocational Interest Blank (SVIB) it a 400 question multiple choice instrument that is used to score vocational preferences for numerous occupations and professions. The Campbell Leadership Index and the Campbell Organizational Survey are derivatives of the SVIB (Institute of Personality and Social Research, n.d.).

The National Fire Academy uses the Campbell Leadership Index and the Campbell Organizational Survey in the Executive Fire Officer Program's Executive Development course. The Campbell assessment instruments identify and describe existing leadership styles and existing organizational culture. They are not intended to predict future success of firefighter applicants or of officer candidates (Harnish, 1998).

The Wechsler Adult Intelligence Scale (WAIS) is a lengthy intelligence test used to determine Intelligence Quotient (IQ). The WAIS is the foundation of the Personality Assessment System (Krauskopf & Saunders, 1994).

An auspicious assessment instrument is the Personality Assessment System (PAS). The PAS uses the Wechsler Adult Intelligence Scale (WAIS) to provide the raw data for a complex assessment. The PAS scores for 512 unique personality profiles. The final profile for a given subject is a result of evaluations of (a) the basic or natant profile, that is genetic at birth; (b) the compensated profile, that is a result of cultural and environmental influences during early childhood; and finally (c) the surface profile, that is a product of the subject's social interactions and resultant self concept as it develops during adolescence (Krauskopf & Saunders, 1994).

The Behavior Interpreter (BI) and the Interview Assistant (IA) are instruments developed by PsyConsultants, Inc. In these complex instruments the interviewer documents the candidate's observed behaviors during an interview. The observed behaviors are the input data. The instruments correlate the data with a Personality Assessment System (PAS) profile and identify an applicant's personality type and corresponding behavior patterns. The unique utility of these instruments is that they take the assessment process one step further than other instruments by (a) relating observed

overt behavior to a personality assessment, and (b) correlating the personality assessment of the applicant to the qualities of a great employee in the occupation for which he or she is applying (PsyConsultants, Inc., 2001).

This subsection of the literature review has identified commonly used instruments for personality assessment. Human resource departments are more frequently using assessment tools for applicant screening and for promotional selections than ever before. Are fire departments using instruments that are specific for the profession of modern firefighting? The following subsection of the literature review examines the assessment instruments that fire departments are using.

ASSESSMENT INSTRUMENTS USED BY FIRE DEPARTMENTS

The purpose of this subsection of the literature review is to identify assessment instruments that fire departments currently use to interpret behavior and personality traits in applicants.

The most common instrument that fire departments use for screening candidates is the Minnesota Multiphasic Personality Inventory (MMPI). Henry (1998) received survey responses from 227 fire departments. Of these 227 fire departments, 96 indicated they used psychological screening during the hiring process. A total of 53 fire departments (55%) that use psychological assessment instruments use the MMPI. Henry continues to relate that 17% use the California Psychological Inventory. In Henry's survey, the MMPI and the California Psychological Inventory were the two most frequently used assessment instruments.

Another popular assessment instrument used by the fire service is the Myers-Briggs Type Indicator (MBTI). The MBTI is founded upon the psychoanalytic method of

Carl Jung. The MBTI is a written instrument that correlates participants' answers with sixteen quintessential personality types (Myers & McCaulley, 1985).

Doley (2003) reports that fire brigades in Australia and New Zealand are currently testing two new instruments to screen firefighter applicants. They are using these instruments because of the damaging impact of unchecked firefighter arson. Firefighter arson is rare, but "the impact on community faith and service morale is disproportionately great" (p. 64).

One of the Australian instruments is The Firefighter Selection and Screening Interview (FSSI). The FSSI employs an interview format that Doley describes in her 2003 article as "a purpose-built semi-structured interview format" (p. 66). This instrument links the applicant's life experiences with personality traits characteristic of firefighter arsonists. It also evaluates behaviors that indicate an applicant's propensity to adjust successfully to his or her role in the fire service. The FSSI is administered by trained interviewers.

The other instrument Doley (2003) describes is the Arson Screening and Prediction instrument (ASAP). The ASAP is a direct assessment of the applicant's personality characteristics and comparison of the applicant's profile to profiles of firefighter arsonists. The ASAP solicits answers describing the applicant's feelings regarding 40 multiple choice questions. The ASAP differs from the FSSI in that the ASAP may "be administered, scored and interpreted by [fire department] administrators" (p. 68).

This subsection of the literature review has identified instruments commonly used by fire departments for personality assessment. These instruments are sometimes

complex and require evaluation by mental health professionals. This subsection of the literature review did not identify any fire department that uses the Personality Assessment System, the Behavior Interpreter, or the Interview Assistant. The next subsection reports the results of the literature review with respect to the qualities of a great firefighter.

QUALITIES OF A GREAT FIREFIGHTER

The author attempts in this subsection of the literature review to identify the qualities of greatness that the Carlsbad Fire Department desires in a new employee.

Since the terrorist attacks on September 11, 2001 the author has seen much discussion of firefighter qualities. The heroic firefighters who sacrificed their lives and those who risked their lives focused the world's attention on the qualities of firefighters worldwide.

In one study conducted within a single fire department, the fire chief, Kenneth Gilliam (1999) identifies three categories of qualifications that his personnel consider of major importance in a firefighter. These three are: (a) personality traits, (b) physical fitness, and (c) psychological fitness. Gilliam infers from his results that although the other categories of education and technical certifications may indicate a higher level of qualification for advancement into administrative positions within the fire department, they may not be as important as personality traits and psychological fitness for determining the compatibility of an individual with the organization at operational levels. Scheig (1995) comments:

> "Even the most technical job is at best 20 to 30 percent technical. The distinguishing factors between outstanding workers and barely acceptable ones

> can often be found in their behavioral approach to the other 70 percent to 80 percent of the job" (p. 11).

Pessemier's article in *Fire Chief* magazine in August of 2003 is concordant with Gilliam (1999) and Scheig (1995). Pessemier relates that successful job performance is 65 percent dependent upon what he calls "soft skills" (p. 75). Pessemier defines soft skills as intangible, or "less tangible" (p. 75), people skills. Pessemier attributes more importance to the soft skill competencies than to technical and mechanical competencies of fire department personnel. Pessemier states,

> There are 23 soft-skill competencies that can be applied to any job, including leadership, decision-making, communication, goal orientation, conflict management and more. The trick is to find out which ones are most important for superior job performance, called position competencies, and then determine which ones you have mastered, called individual competencies. You can then train for the gap. (p. 75-76)

Pessemier does not recommend, nor does he describe, in this article an instrument or instruments for assessing and evaluating soft skill competencies. Pessemier is president of Performance Metrics, a company that provides these assessments exclusively to fire departments, and the author presumes that Pessemier would recommend his company's product for use in firefighter psychological assessments.

The goals of psychological and personality testing for firefighter candidates should be to identify the specific qualities that lead to success in the fire service. "Some obvious traits would be the ability to operate in a living environment, to resolve conflict, to follow instruction, and to function during emergencies" (Smith, 1998, p. 136). Smith

goes on to make an interesting point by relating that the fire service is looking for maturity among a group of young people whom maturity has not yet tempered. The fire service is looking for firefighters (a) who will not be careless; (b) who will think on their feet, comparing the benefit of each action to the risk involved in order to make appropriate decisions in emergent situations; and (c) who will not panic, but will maintain focus (Smith, 1998).

These qualities do not make firefighters an homogenous group from a specific gender, race, or social class. Unfortunately there are many individuals, and in some cases organizations that believe entire groups of individuals do not have the makings of great firefighters. Commitment is the quality that transcends these differences. Other observable qualities include: (a) the ability to get along with others, (b) some technical orientation, (c) self discipline, (d) ability to accept direction, (e) adaptability, and (f) a sense of humor. (The 'typical' firefighter, 2002).

The ability to get along with others is particularly important in the communal fire department setting. The Carlsbad Fire Department work schedule of 24 hours on duty followed by 48 hours off duty places firefighters in a communal setting for one third of their careers. Frequent overtime shifts increase this amount of communal time. Social tolerance and agreeability are important personality traits in this setting (Henry, 1998).

According to Carter (1997), there are three attributes that project greatness to the world at large. These are: (a) talented, (b) down to earth, and (c) approachable. Carter continues in his discussion to say that these people also tend to (a) share what they know, (b) encourage you to interact with them, (c) fit in wherever they go, and (d) do not put on airs of self importance.

When we look at the fire service in particular, we find that there is a distribution of personality types that differs dramatically from the distribution throughout society in general. The fire service contains a significantly higher percentage of personality types that prefer to remain anonymous. They seek stability in their lives and in the fire service organization, and hold tightly to traditional methods of operating. This "Lone Ranger" type personality is part of a protection mechanism from the physical and emotional stresses of emergency services. Unfortunately, it also makes it difficult to receive well deserved recognition for routine heroic acts and jobs well done. (Cassel, 1997).

Heroic acts are associated with severe and intense incidents. Regehr et al. (2000) states, "…severe emotional reactions are normal responses to exposure to traumatic events in the line of duty" (p.333). Regehr goes on to identify personality traits that determine the severity and duration of emotional reaction to horrific trauma. Individual personality differences in (a) resilience, (b) negative beliefs, (c) interpersonal relationships, (d) self-efficacy, and (e) sense of control are associated with a firefighter's response to these incidents and his or her ability to cope successfully with the stress after the incident. Regehr states, "Individuals with feelings of insecurity, lack of personal control, and alienation from others are more likely to experience higher levels of distress" (p. 338).

The literature reviewed in this subsection scrutinized the attributes of greatness and described qualities that differ from one another based upon the perspective of the observers. These perspectives are (a) that of other firefighters, and (b) that of the public they serve. The author desires to discover the qualities of a great firefighter from the

perspective of fire officers in departments nationwide. This research project shall undertake to accomplish that end.

PSYCHOLOGICAL TESTING IN THE FIRE SERVICE

The purpose of this subsection of the literature review is to discover how extensively fire departments are using psychological assessments.

The number of fire departments using psychological assessment instruments is small. In a survey of 38 fire departments, Harnish (1998) found only three departments were using any form of psychological testing in the selection of firefighters. Harnish relates that those fire departments using psychological assessment instruments during hiring or promotional processes use them in conjunction with other methods such as assessment centers and cognitive tests.

Henry's Applied Research Project of 1998 reveals that of the 227 fire departments that responded to his survey, 42% conduct psychological assessments during the hiring process.

The number of fire departments using psychological testing may not be in the majority, but the concept is not new. In 1938, police departments in Toledo, Ohio and in Wilmington, Delaware began using psychological screening of applicants. In 1959, Portland, Oregon used psychological assessment instruments for both police and fire personnel. In 1978, the Boston, Massachusetts Fire Department started using psychological assessment as part of its hiring process (Henry, 1998).

The Rural Metro Fire Department in Knox County, Tennessee experienced rapid growth during the years between 1990 and 1995. The traditional methods they used to select personnel to fill supervisory positions did not meet the needs of the accelerated

growth. In 1995 Rural Metro began using psychological assessments to determine the future success of supervisory candidates. Although the psychological assessments were expensive, they felt the damage caused by hiring or promoting ineffective leaders was greater than the cost of the assessment instrument (Harnish, 1998).

The fire brigades of Australia and New Zealand are troubled by the impact of firefighter arson upon the public's faith in the fire service and the adverse effect of firefighter arson upon department morale (Doley, 2003). For that reason they are currently experimenting with two psychological assessment instruments during applicant screening.

In this subsection of the literature review the author discusses that, although fire departments are not extensively using psychological assessments as screening tools, they are beginning to experiment with them and are realizing the usefulness of these instruments in both the hiring process and in the promotional process.

VALIDITY AND LEGALITY OF PSYCHOLOGICAL ASSESSMENTS

The author is concerned that any psychological assessment instrument chosen by a fire department for use in the hiring process is (a) valid, (b) does not infringe any First or Fourteenth Amendment rights, and (c) does not violate the Americans with Disabilities Act.

This subsection of the literature review examines psychological assessment validity and the legal issues relating to these assessments. The author's intent is to identify an assessment instrument that the Carlsbad Fire Department may validly and legally use to identify applicants with the behavior and personality traits of great firefighters.

Validity Issues

Human personalities are extremely complex. No single assessment instrument can account for every nuance of personality. Subtle genetic mutations produce offspring with many behavioral similarities to parents and siblings, but the effects of (a) environment, (b) culture, (c) society, and (d) self-image combine to chisel out a unique personality for each individual member of the world's population (Krauskopf and Saunders, 1994).

A valid test is one that identifies correct relationships between a candidate's score on the test and job performance. Employees hired using a method that includes a valid test will result in a higher number of employees with the desired traits than a method that does not relate test results with job performance (Kamp, 1997).

R. Hogan, J. Hogan, and Roberts (1996) summarized data regarding the use of personality assessments during the decision making process of hiring new employees. Hogan et al. states, "Our major conclusions are that (a) well-constructed measures of normal personality are valid predictors of performance in virtually all occupations,…" (p. 469).

Kamp (1997) states, "Personality traits are characteristic behavior patterns that are stable and enduring" (p. 24). A fire officer who is able to validly relate observed behavior patterns of great firefighters to the observed behavior of applicants during interviews has insight that simplifies the decision making process during the hiring of recruits. A goal of this Applied Research Project is to identify an assessment instrument that validly relates observed behavior to the qualities of a great firefighter. The author desires to identify a psychological assessment method that will validly correlate observable behavior with

individual personality patterns of great firefighters during a structured or unstructured interview.

Documenting observed behavior during interviews is not the same as documenting subjective impressions during unstructured interviews. Kamp (1997) relates that an unstructured interview is not a reliable method for evaluating applicants, and states, "…impressions are subjective and fall prey to many biases…" (p. 26).

Examples of objective observations of behavior that do not fall prey to bias include but are not limited to (a) answering questions rapidly versus hesitating before answering, (b) posture, (c) continuous eye contact with interviewer in contrast to no eye contact with interviewer while answering questions, (d) sitting still or shuffling during the interview, and (e) smiles frequently or seldom smiles during the interview. These are linguistic descriptions of an applicant's behavior, not impressions, and as such can be mapped to behavioral patterns that are consistent across various situations and large populations. The output of this process, referred to by psychologists as the nomothetic approach, is a personality assessment.

Winne and Gittinger (1973) relate the results of numerous research projects in which clinicians successfully predicted test scores on the basis of observed overt behavior with a level of confidence at 0.01 ($p = .01$).

The validity of an assessment instrument hinges upon the success it demonstrates in correctly identifying personality traits and predicting the behavior desired by the fire department. "Successful work speaks for itself…" (Krauskopf and Saunders, 1994, p. 10).

It is requisite that (a) the fire department administration recognizes and describes the traits and behavior desired in an employee, (b) the instrument correctly identifies candidates' personality traits, and (c) the instrument correctly predicts candidates' behavior.

Fire departments are beginning to use psychologists to provide assessment instruments and conduct interviews. Competition for this market has increased. Smith (1998) states,

> Fire administrators feel their hands are tied and get frustrated when they see a high percentage of their superior candidates eliminated by their psychological test scores and then being hired by other agencies.
>
> "Psychologists are given more power than they should [have]," says Robert Thomas Flint, Ph.D., of Concord, California, who sometimes reevaluates potential peace officers and firefighters who have failed psychological tests. Although he says that 40 to 50 percent of the original decisions were valid, he has found that about 30 to 50 percent of the rejected candidates are acceptable and can handle the job.
>
> Dr. Flint feels that during the past 10 years, the Ph.D. has been "watered down" and that many of these new psychologists too often paint by the numbers and disqualify a person because he has an unusual background. These psychologists, he explains, do not have an adequate background in statistics and research to make them fully competent in using the tests with unusual populations. In other words, they are trained to identify problems in the general

> population but are less skilled in identifying the strengths in special groups such as firefighters. (p. 135)

Smith (1998) gives examples of candidates that were disqualified by the initial psychological assessment, sought a second opinion and were found to be qualified by the second assessor. This begs the question, wherein lies the flaw, in the instrument, or in the evaluator's assessment?

Legal Issues

The legal issues surrounding psychological testing during the hiring process focus on concerns for (a) the First and Fourteenth Amendment rights of applicants, and (b) the Americans with Disabilities Act (ADA). Identifying personality traits and behavior that either make the applicant a great prospective employee or disqualify the applicant does not violate the applicant's right to privacy.

The American Civil Liberties Union unsuccessfully sued the Jersey City Fire Department for what they considered privacy violations of psychological screening. The court, ruling in favor of the Jersey City Fire Department, related in the ruling that psychological screening is not only legal, but is important. Psychological screening is a valuable tool for reducing the fire department's exposure to liability for hiring emotionally and psychologically unfit firefighters (*McKenna v. Fargo*, 1978/1979).

Psychological screenings do not violate the ADA's regulations for medical examinations. The concern of the ADA and of the Equal Employment Opportunity Commission is that psychological tests measure differences between applicants demonstrating normal personality traits, but not the differences between applicants

demonstrating normal behavior and those demonstrating abnormal behavior (Kamp, 1997).

Henry (1998) states:

> The written personality-traits profile test is not clinical or rigorous and is not considered a medical fitness examination for the purposes of Americans with Disabilities Act (ADA) analysis. Since the personality-traits profile is not a medical test, it can be given before provisional job offers and does not violate the ADA's prohibition against pre-offer medical examinations.
>
> The ADA presents no obstacle to post-offer psychological evaluations, because such testing reasonably falls into the category of appropriate medical examinations, especially when done in the context of hiring decisions involving sensitive, highly specialized, public safety jobs. From the ADA point of view, the stresses and risks involved in fire fighting work appear to justify psychological testing. (p. 27)

This subsection of the literature review briefly discusses the concept of validity and its relevance to the assessment instrument. The author discovers that results from instruments are often (a) normalized to general populations, (b) applied to unusual populations such as the fire service, and (c) subsequently interpreted improperly or incompletely by inexperienced evaluators. Applicants have challenged the results of assessment instruments and in some cases won reversals of the evaluators' decisions. The author recognizes the need for an assessment instrument that does not rely upon the experience and skills of individual evaluators.

This subsection of the literature review also addresses the legality of psychological assessments from the perspective of the First and Fourteenth Amendments. The author finds court decisions in favor of fire departments conducting psychological screening during the hiring process.

PROCEDURES

The author conducted evaluative research utilizing literature reviews, interviews, survey questions and internet searches. Literature review began prior to the author's attendance in the National Fire Academy Executive Development Course when the author obtained publications from researchers who were developing psychological assessment instruments for employment and promotional screening. Research continued at the National Fire Academy Learning Resource Center in Emmitsburg, Maryland during the author's attendance in Executive Development in August of 2003, the first course of the Executive Fire Officer Program at the National Fire Academy.

Interviews and telephone conversations with mental health professionals, industrial and occupational psychologists, human resource professionals, and public safety professionals who have used psychological assessment instruments during hiring and promoting processes provided insight and guidance during the research process.

The author developed a survey instrument (Appendix A) in order to elicit data from fire departments nationwide regarding their use of psychological assessment instruments. The survey consists of 10 questions. Several of these 10 questions contain subsets of questions that require answers only if the answer to the stem item is affirmative. The survey solicits information from fire departments regarding their use of psychological assessments during the hiring process and the promotional process. The

survey includes questions regarding the success of employees subsequently hired after their assessments were evaluated. Several questions in the survey request information regarding challenges to the assessment instrument by rejected applicants. The final item on the survey is a list of 20 personality traits. The persons receiving the survey are instructed to rank these 20 personality traits according to their importance in the selection or promotion of an applicant. The author provided blank lines for a respondent to add optional personality traits that he or she considered important.

The author distributed the survey instrument (a) to approximately 180 fire officers who attended the New Mexico Municipal Fire Chiefs Association Conference in November, 2003, (b) to Ron Kanterman who used an electronic mailing list to send it to an undisclosed number of members of the National Fire Academy Alumni Association, (c) to 28 members of the National Fire Academy August, 2003 Executive Development class and the two instructors, and (d) to 100 randomly selected members of the International Association of Fire Chiefs (IAFC). The IAFC performed a random sort and selection of their membership database into a 100 item subset. Ms. Gillian Goodman, Director of IAFC Member Services, sent the list of 100 members to the author as an electronic mail attachment in text format. The author imported the text file into an Excel spreadsheet and subsequently produced a mail merge that facilitated mailing the survey questionnaires to the 100 IAFC members listed.

The 99 fire departments that responded to the survey is the sample size for this project (n = 99). The responses were tabulated in an Excel spreadsheet. The author used Excel spreadsheet functions to perform calculations on the response data. The results of these calculations are tabulated in Appendixes B through D.

LIMITATIONS

The survey instrument did not differentiate among volunteer, career, or combination departments. The Carlsbad Fire Department is a full time paid fire department and does not use volunteer firefighters or officers. Occasionally respondents to the survey identified their fire departments as volunteer departments. None of those volunteer departments use psychological assessments during the accepting or rejecting of applicants or officer candidates. The survey instrument does not require respondents to identify their departments as volunteer, career, or combination. The author does not know how many respondents represent career paid departments and how many represent volunteer or combination departments. The results of the survey may indicate an overall lower number of departments responding positively to the first two questions of the survey as a result of volunteer or combination department responses. The survey should include a question that yields information identifying the type of department responding to the survey.

The final survey question requires the respondent to numerically rank twenty behavior and personality characteristics according to the importance of each in the selection of an applicant. Some respondents rank multiple characteristics with the same priority number. One respondent ranks only the characteristics that he that he considers most important as priority number one and did not rank any other characteristics. The author's opinion is that this inconsistency with the respondents' methods of ranking is a limitation of the survey procedure, but that high priority characteristics are nevertheless successfully identified.

The survey instrument used in this research project is limited in that personality characteristics are prioritized according to their desirability. The survey instructs respondents to skip any characteristics that they do not consider important in the selection of an applicant. This approach does not provide a means to identify whether the respondent believes that any of the skipped characteristics have negative impact on applicant selection decisions. The ability of an assessment instrument to identify the negative attributes of an applicant or candidate that may disqualify him or her from employment is important. The survey instrument does not prioritize undesirable characteristics in their order of importance for disqualifying an applicant or candidate.

Another limitation of the survey is that the role of the respondent in the fire department is not identified. The priority assigned to a characteristic by a respondent may not be the same priority as that of (a) other fire department officers within the same fire department, (b) the administrative personnel, (c) the human relations department serving the fire department, or (d) the city administration.

An interesting discrepancy, but not necessarily a limitation, occurred when one fire department presented two individual and contradictory responses to the survey. One respondent answered “No” to question #1 and to question #2, but the other answered “Yes” to both questions. The situation at that department remains unknown.

Regardless of the limitations and a few unusual responses, the results of the survey support the findings of the literature review. These results and findings are presented in the following section.

RESULTS

In this section the author presents the information that he collected utilizing the literature review and the survey instrument. The sample for the survey is the number of fire departments that responded to the survey. This sample size is 99 (n = 99). The survey provides data that the author uses to answer each of the five questions set forth in the Introduction section of this research paper and that are its foundation.

By asking the first question the author seeks information regarding interview instruments that are currently available to use for screening entry level candidates. Though neither exhaustive nor comprehensive, the literature review revealed eight commonly used personality assessment instruments for use in screening applicants and one uncommon instrument.

The commonly used instruments are (a) the Minnesota Multiphasic Personality Inventory (MMPI), (b) the Myers-Briggs Type Indicator (MBTI), (c) the California Personality Inventory (CPI), (d) the Cattell 16PF, (e) the Fundamental Interpersonal Relations Orientation – Behavior (FIRO – B), (f) the Strong Vocational Interest Blank (SVIB), (g) the Campbell Leadership Index, and (h) the Campbell Organizational Survey. Each of these eight instruments determines personality traits by scoring the answers to questions on a written test. These assessment instruments are direct methods through which the evaluators create linguistic metaphors to describe individuals.

Though currently available but neither well known nor commonly used, the Personality Assessment System (PAS) arrives at linguistic descriptions of personality types by correlating the results of the Wechsler Adult Intelligence Score (WAIS) with several stages of human development. Although Winne and Gittinger (1973) relate success in predicting PAS assessments by documenting observed overt behavior the

author did not find evidence in the literature that the PAS, nor any instrument based upon the PAS, is currently in use during employment screening.

By asking the second question in the Introduction the author seeks information regarding interview instruments that are currently used by fire departments to screen entry level candidates. The results of the survey conducted during this Applied Research Project indicate that 35% of the fire departments nationwide that responded to the survey (n = 99) use psychological assessments during the hiring of fire department personnel (see Appendix B). This result is consistent with the author's findings during the review of current literature. Fire departments using psychological screening instruments during the promotional process number much less than those using psychological assessments during the hiring process. Out of the fire departments responding to the survey, 12% indicate the use of psychological screening during the promotional process. It is interesting to note that only 9% of the departments that responded to the survey use psychological assessments during both the hiring and the promotional phases. The survey instrument does not identify which specific psychological assessment instruments described in the author's Literature Review the various fire departments use in their evaluation of applicants or promotional candidates.

The survey reveals that 52% of the fire departments that conduct psychological assessments during the hiring or the promotion process (n = 33) contract with an individual psychologist, psychiatrist, or mental health professional to evaluate assessment instruments, and 76% of these fire departments use the same individual to administer the instrument. The author's opinion is that the fire departments using psychological assessments during hiring and promotion are neither aware of nor familiar with the

fundamental psychological theory supporting specific assessment instruments. The complexity of these instruments requires evaluation by mental health professionals. It is for this reason that fire departments retain the services of clinical psychologists, firms of psychologists, and other mental health professionals to select the assessment instrument and to evaluate the results of the assessments. Review of the literature and the author's survey indicate that fire departments most often rely upon a psychologist or psychiatrist to choose an appropriate assessment instrument for entry and promotional screening and that the majority of the instruments are founded upon the eight assessment methods listed in the literature review of this report.

After applicants are hired, 13% of the 30 fire departments using psychological assessments during applicant screening and responding to question number six in the survey (n = 30) indicate that the assessment evaluations always correlate to the applicants' observed performance, traits, and behavior (see Appendix C). Fifty three percent indicate that the evaluations correlate to the applicants' observed performance, traits, and behavior more than 66% of the time. Seventeen percent of the departments responded that from 33% to 66% of the time the evaluations correlate to observed performance, traits, and behavior. Thirteen percent of the departments responded that less than 33% of the time the evaluations correlate to observed performance, traits, and behavior. Three percent of the responding departments indicate that the observed performance, traits, and behavior never correlate to the assessment evaluations of applicants. The majority (66%) of fire departments responding to the survey indicate the assessment process that they use positively correlates to the observed performance, traits, and behavior of the employee more than 66% of the time.

The survey does not attempt to identify to what degree the responding fire departments are satisfied or dissatisfied with the performance of the assessment instruments based upon these correlations. It is unclear to what extent respondents to question number six in the survey require correlation of observed performance, traits, and behavior with test evaluations in order to include the applicants in the correlated group. For example, do the respondents require 100%, 66%, greater than 50%, or some other ratio of correlation between the assessment evaluation and observed performance, traits, and behavior in order to qualify the results as correlated? The author's only concern is that fire departments decide to their satisfaction, however subjectively, and regardless of their criteria, that assessment evaluations positively correlate to observed performance, traits, and behavior.

Question number seven of the survey is an interesting question. It attempts to discover if applicants who are disqualified by a department's psychological evaluation successfully seek employment at other fire departments. It also attempts to discover if the department that decides to hire these applicants is satisfied with the employee's performance. The number hired by other departments after being disqualified by the initial fire department psychological assessments (44%) and the number not hired after being disqualified by the initial fire department psychological assessments (56%) are closely divided (n = 27). Only 36% of the fire departments responding to this survey question (n = 27) have any information regarding the success of the applicants at the other departments. Although interesting, the results of this survey question do not prove useful to the goal of this project.

Question number eight of the survey solicits numerical data describing the number of times applicants seek second opinions after being disqualified by a fire department's psychological assessment process. Question number nine of the survey solicits numerical data describing the number of times applicants seek legal action after being disqualified by a fire department's psychological assessment process. The number of applicants that sought second opinions after being disqualified by the fire departments that responded to these questions is 18% (n = 33). The number of applicants that sought legal action after being disqualified is 9%. Out of 33 fire departments responding to these two questions, one department indicates that the second opinion contradicted the original evaluation and that this second opinion resulted in the department hiring the applicant. Three fire departments indicate that an applicant sought legal action after a disqualifying evaluation. This legal action did not result in the reversal of an evaluation. None of these applicants were subsequently hired (see Appendix B).

By asking the third question listed in the Introduction section of this research paper, the author attempts to discover what qualities the surveyed fire departments consider most important in an applicant.

It is both interesting and important to note that the fire departments surveyed vary dramatically in the rank they assign to the twenty traits listed in the survey. The factors that influence their decisions to rank one trait of greater importance than another remain indeterminate. A noteworthy result of survey question number ten is that 26% of the priority rankings (n = 1464) by fire departments place all the soft skills that describe personality traits and behavior among the top three priorities for making decisions during the hiring process. The six specific soft skills (a) attitude, (b) motivation, (c) respect for

others, (d) commitment, (e) capacity to learn, and (f) desire to improve account for 53% of the top three priority selections (n = 439). Four percent of the priority rankings (n = 1464) by fire departments place all the hard skills that describe knowledge and demonstrated technical skills among the top three priority selections. The four specific soft skills (a) motivation, (b) attitude, (c) commitment, and (d) desire to learn are ranked at the number one priority in 55% of the rankings (n = 151) for the number one priority (see Appendix D). This result is consistent and supported by the United States Department of Labor research referenced earlier in this research project by Kogan in 1995 that aptitude and desire to learn are important qualities to assess in prospective employees and candidates for promotion.

By asking the fourth question in the Introduction section of this research paper, the author seeks to identify an instrument that the Carlsbad Fire Department might use during employment and promotional screening. Each of the eight commonly used instruments identified by this research project might be used by the Carlsbad Fire Department during candidate screening; however, review of the literature and fire department response to the survey indicate some dissatisfaction with these instruments. Of the 30 fire departments using psychological assessments and that answered question number six of the survey, 16% indicate that the assessment instrument they use positively correlates to the observed performance, traits, and behavior of the employee from 0% to 32% of the time (see Appendix C). Does this degree of dissatisfaction support Cassel's determination in 1997 that there is a distribution of personality types in the fire service that differs dramatically from the distribution throughout society in general? Does this difference in distribution beg for an instrument unique to the fire service? Can the

Personality Assessment System and the instruments based upon it meet this need? The author did not find evidence that the Personality Assessment System (PAS), nor any instrument based upon the PAS, is currently in use during employment screening; but the success of Winne and Gittinger (1973) with PAS assessment instruments is of such consequence that the author shall further investigate this remarkable system and the instruments based upon it in an attempt to answer these additional questions.

By asking the fifth question in the Introduction of this research paper the author seeks information regarding past, present or impending litigation ensuant to applicant disqualification by a psychological screening process. Of all the departments using psychological assessment instruments (n = 35), three departments indicate that applicants sought legal recourse to a negative assessment or to a disqualification from employment or promotion. One department declined to answer the survey questions because of litigation currently in progress. The respondent did not disclose the nature of the litigation, but the author presumes it relates to the department's psychological assessment process.

DISCUSSION

Exposure to emergency scenes is stressful. Carlisle (1999) lists several features that predispose a firefighter to psychological disorders due to critical incident stress. Included in Carlisle's list are: (a) young in age, (b) shy, (c) inhibited, (d) uncertain about identity, (e) reluctant to take leadership roles, (f) believe their fate is a result of factors beyond their control, (g) emotionally suppressed, and (h) engage in wishful thinking.

Gilliam (1999) infers that although the categories of education and technical certifications may indicate a level of qualification for advancement into administrative

positions within the fire department, they may not be as important as personality traits and psychological fitness for determining the compatibility of a firefighter candidate with the organization. The results of the author's survey bear evidence that the fire departments surveyed support Gilliam's inference. The 99 fire departments responding to the survey place the six intangible skills (a) attitude, (b) motivation, (c) respect for others, (d) commitment, (e) capacity to learn, and (f) desire to improve in the top three priorities for qualities of a great firefighter more often than any other attributes in the list. These six attributes account for 53% of the responding fire departments' selections in the top three priorities (n = 439). It is interesting to note that the responding fire departments place motivation among the top three out of twenty priorities in 59% of the 94 rankings for this attribute. Respondents rank attitude in the top three priorities in 61% of the 90 rankings for this attribute (see Appendix D). The survey instrument allows for responding fire departments to write in attributes that are not included in the list, but that the respondent feels are important qualities of a great firefighter. Three intangible skills not listed in the author's survey are (a) honesty, (b) integrity, and (c) ability to work in a team. Several fire departments responding to the survey wrote in these skills and assigned them high priority. Three fire departments inserted the attribute of honesty in the top two priorities, and ability to work in a team in the top four priorities. Four fire departments inserted the attribute of integrity in the top two priorities. The author's opinion is that these three intangible skills are as important as the six skills (a) attitude, (b) motivation, (c) respect for others, (d) commitment, (e) capacity to learn, and (f) desire to improve that captured 53% (n = 439) of all the votes for skills in the top three priorities (see Appendix D).

The instructions with question number ten in the survey direct the respondents to skip any characteristics they consider irrelevant or insignificant when evaluating an applicant or candidate. In contrast to the prioritization of the intangible skills, fire departments responding to question number ten of the survey consider tangible skills such as (a) certifications held, (b) experience as a firefighter or emergency medical technician, and (c) demonstrated firefighting or emergency medical skills to be irrelevant or insignificant by skipping them during the selection of priority characteristics. Twenty six percent of the fire departments skip certifications held. Twenty eight percent of the fire departments skip experience as a firefighter or emergency medical technician. Twenty nine percent of the fire departments skip demonstrated firefighting or emergency medical skills (see Appendix D). These results are concordant with the opinions of (a) Gilliam (1999), (b) Scheig (1995), and (c) Pessemier (2003) who assert that intangible skill competencies are more important than the didactic, technical, and mechanical competencies of fire department personnel. This approach does not provide a means to identify whether respondents believe that the skipped characteristics have negative impact on applicant selection decisions. The ability of an assessment instrument to identify the negative attributes of an applicant or candidate that may disqualify him or her from employment is important. The survey instrument does not prioritize undesirable characteristics in their order of importance for disqualifying an applicant or candidate.

The two characteristics that fire departments most often skip in the prioritization question of the survey are (a) risk taker, and (b) patriotic. Fifty two percent of the fire departments responding to the survey skip *risk taker*. Forty nine percent of those fire departments skip *patriotic* (see Appendix D). Presuming the respondents skip these

characteristics because they are negative characteristics is reckless. The author doubts that any fire department officer or human resource professional considers patriotism a negative characteristic during the hiring or promotional processes. In contrast, a fire department officer may consider risk taking to be either a positive or a negative characteristic depending upon the cultures of (a) the fire department, (b) the community, (c) the governing body, and (d) the evaluator. The point the author makes here is that high priority characteristics are desirable in applicants and promotional candidates, but low priority characteristics are not necessarily undesirable. This point begs further research into the personality characteristics and attributes that not only qualify an applicant or candidate, but those that may disqualify him or her.

The author notes that Gilliam's research (1999) may explain why city governments look outside the fire department for future administrative personnel. In order for an incumbent to advance into an administrative position within the fire department he or she must possess the educational credentials and technical certifications required for the position. Since an officer development program may encourage personnel to pursue educational credentials and technical certifications in the pursuit of administrative positions, the emphasis should remain upon (a) personality traits, (b) physical fitness, and (c) psychological fitness as the most desired qualities for firefighter recruits. Knowledge of the variety of personality types and the predictable behavior they display will increase the effectiveness of fire department leaders and trainers. This knowledge will (a) enable the leaders and trainers to successfully facilitate departmental change using different leadership and educational techniques for different personality types, and (b) improve the department's success in hiring great firefighters.

The Minnesota Multiphasic Personality Inventory (MMPI) and the California Psychological Inventory (CPI) are the most commonly used personality assessment instruments (Henry, 1998). Smith (1998) relates that because many psychologists who use the MMPI fail to identify strengths in special groups such as firefighters, they frequently disqualify applicants because of unusual backgrounds. Walk into any fire station in the nation and ask each person about his or her background; you will quickly discover diversity unmatched in any other profession. Smith continues in his discussion to explain that many applicants with a burning desire to become firefighters are inappropriately disqualified because they have unusual backgrounds or possess strengths not identified by the psychologist assessing the candidate.

James Tracy, in a telephone conversation with the author on Friday, January 9, 2004, related in summary that he and several other psychologists, including Mike Roberts, are developing an assessment instrument that fire departments might use to screen applicants. They are attempting to identify among firefighters a unique set of personality traits common to this special group. Their goal is to design an assessment instrument that will produce an output that an evaluator may compare to the unique set of firefighter traits. An evaluator may then use this comparison to make hiring decisions. The foundation of this assessment instrument shall be the California Personality Inventory. The author intends to follow closely the development of this instrument.

The Meyers-Briggs Type Indicator (MBTI) is an instrument that has proved useful for improving existing employees' interpersonal relations on the job. Employees and supervisors who understand their own MBTI personality type and the personality types of peers, supervisors and subordinates are better equipped for effective

communication, leadership, and productivity. The MBTI is a tool that fire department leaders can use to improve their influencing skills. It is not a predictor of future great employees (Platts, 2000).

The interaction of culture and society upon genetic traits results in a spectrum of varied and diffuse normal personalities, and each is unique. The strength of the Personality Assessment System (PAS) is that the PAS is a system of normal personality (Krauskopf and Saunders, 1994). “The PAS, more than any system I am aware of, attempts with fair success to describe the complex individuality that results from this interaction” (Krauskopf and Saunders, 1994, Forward section, ¶ 11).

Winne and Gittinger (1973) relate success in predicting Personality Assessment System (PAS) evaluations by documenting observed overt behavior. The PAS enables a clinician to use structured interview techniques to conduct successful personality assessments by documenting observed overt behavior during the interview process. The Behavior Interpreter (BI) and the Interview Assistant (IA) are computerized programs developed by PsyConsultants, Inc. that correlate observed overt behavior with PAS assessment. The BI and the IA then output linguistic metaphors and descriptors that fit the mental images created by the combination of observed traits

This is a significant development in the pre-employment screening process. The Behavior Interpreter (BI) and the Interview Assistant (IA) allow employers to precisely assess candidates. The employer needs only a brief familiarization with the instruments in order to successfully and precisely evaluate an applicant for the desired qualities of a great employee in a specific profession. This eliminates the delay between administration of the assessment instrument and the evaluation of the candidate. Hiring decisions can be

made without waiting days or weeks for the evaluation to return from the mental health professionals or from a distant organization.

The Personality Assessment System, the Behavior Interpreter, and the Interview Assistant may provide the Carlsbad Fire Department with an easy, efficient, economical and specific method for screening recruit and officer candidates. While it is certainly important to identify pathological profiles prior to hiring an individual, the author is primarily looking for instruments that identify the qualities of great firefighters, officers and staff among candidates presenting with normal behavior. The assessment instruments that are founded upon the Personality Assessment System assess the personality characteristics and attributes associated with normal behavior. James Tracy, Ph.D., and Mike Roberts, Ph.D. are also focusing their project development upon evaluating fire department applicants who present with normal behavior. The author's opinion is that these two systems may provide the Carlsbad Fire Department with the most appropriate screening tools during the hiring and promotional processes.

RECOMMENDATIONS

The results of this research project justify continued investigation by the author into the specific assessment instruments that fire departments are using. Based upon the author's review of the literature and the results of the survey, it is apparent that several instruments are available for fire department recruit and promotional screening.

This project identifies the levels of satisfaction that various fire departments experience with psychological assessment instruments in general. The author should now delve more deeply into which specific instruments are successfully and consistently identifying the applicants who possess the qualities of future great employees.

In a personal communication with the Director of the Carlsbad Mental Health Association, Noel Clark on August 20, 2003, the author discovered the existence of a publication that lists normative studies for psychological assessment instruments. The information contained in this publication may be useful for fire departments that are considering implementing psychological assessments during the hiring or promoting process. It may assist them to choose an appropriate instrument that suits their needs. The author has not yet identified this publication.

The relatively innovative nature of psychological screening of firefighter candidates begs fire administrators and human resource managers to look for new developments in this field. The work in progress by James Tracy, Mike Roberts and others should be followed closely. They recognize the unique personality traits of fire department personnel and the unique environment in which firefighters work and live. If the assessment instrument that these psychologists develop successfully identifies applicants for successful careers in the fire service, fire administrators and human resource managers may have a powerful addition to their decision making toolbox.

The author recommends further evaluation of Personality Assessment System (PAS) instruments for use in the fire department's arsenal for (a) screening firefighter candidates, (b) promoting within the organization, (c) identifying potential personnel issues, and (d) resolving personnel issues. PAS instruments that appear most promising are the Behavior Interpreter (BI) and the Interview Assistant (IA). The BI and the IA are personality and behavior assessment instruments that can be used by fire department administration and human resource departments without incurring the high cost and time delay for evaluation by mental health care professionals. Fire department administration

can apply these instruments after reviewing the literature included with the programs and using the help files within the programs. Although these instruments and the system upon which they are based have been in development for the past forty to fifty years, they are new to the fire service. The concept of pre-employment psychological screening and assessment of firefighter candidates is itself a relatively new concept for fire administrators. Instruments that eliminate the onus and expense of professional interpretation are especially attractive to administrators and human resource professionals.

The author suggests that a fire department planning to use personality and behavior assessments during the hiring or promotional processes survey not only the current fire department personnel, but also the community it serves in order to determine the qualities of a great firefighter as perceived by the community it serves. It would be useful to discover and compare the priorities of the public with the priorities of fire department personnel and with the results of this research project.

The use of behavior interpretation and personality assessment instruments by fire departments is in its infancy. Continuing research and experimentation upon the unique population comprising the fire service is indicated. The author intends to proceed toward the implementation of an assessment process that reliably identifies the great firefighters among a group of applicants.

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APPENDIX A - SURVEY INSTRUMENT

Dept. Name:_____City:_____State:___

1. Does your fire department currently use psychological testing during the screening of firefighter applicants? Yes No
2. Does your fire department currently use psychological testing during the screening of officer candidates? Yes No

If questions #1 and #2 are BOTH answered "No", proceed to question #10, otherwise continue with question #3.

3. Who administers the test?
    a. Fire Department Administration
    b. Human Resources/Personnel Department
    c. Psychologist/Psychiatrist
    d. Physician
    e. The organization or company that owns or provides the test
    f. Other (describe briefly):
4. Is the test evaluated by
    a. an individual,
    b. a group of individuals,
    c. an organization,
    d. a computer program,
    e. other (describe briefly):

5. Identify the qualifications of the individual, the group of individuals, the name of the organization, or the name of the computer program (e.g.: Personnel Director, Occupational Medicine Specialist, Psychiatrist, Psychologist, mental health professional or organization, counseling service, etc.)
6. Have the test results correlated to the person's observed performance, personality traits, and behavior?
    a. Never
    b. For less than one-third of the persons hired/promoted
    c. For one to two-thirds of the persons hired/promoted
    d. For more than two-thirds of the persons hired/promoted
    e. Always
7. Have other departments ever hired applicants that were disqualified by your department's psychological test? Yes No
    - If "Yes" have they been successful in other departments?

      Yes No Don't know
8. Have you had applicants/candidates request or seek a second opinion on the evaluation?

    Yes No

    If "Yes":

    a. Approximately how many times has this occurred? _____
    b. Approximately how many times have the second opinions contradicted the original evaluation? _____
    c. Approximately how many times have the second opinions led to hiring/promoting the individual? _____

9. Have you ever had applicants/candidates take legal action as a result of the evaluation?

   Yes No

   If “Yes”:

   - Approximately how many times has this occurred? _____
   - Approximately how many times has the evaluation been reversed or disqualified as a result of the legal action? _____

10. Rank the following characteristics of an applicant/candidate in their order of importance to you, with “1” being the most important. Skip/leave blank any that you feel are irrelevant or insignificant.

_____Sense of humor

_____Certifications

_____Desire to improve skills

_____Commitment to the fire department

_____Energetic

_____Experience as a firefighter or EMT

_____Persistence

_____Risk taker

_____Caring

_____High Self-esteem

_____Other:_____

_____Other:_____

_____Motivation

_____Capacity to learn

_____Demonstrated skills

_____Attitudes

_____Respect for others

_____Problem solving ability

_____Adaptability

_____Sensitive

_____Moral

_____Patriotic

_____Other:_____

_____Other:_____

APPENDIX B - SUMMARY DATA

		n
Number of departments responding to survey	99	
Departments using psychological instruments	35%	99
Departments using psychological instruments during hiring process	32%	99
Departments using psychological instruments during promotion process	12%	99
Departments using psychological instruments during both hiring and promotion processes	9%	99
Instrument administered by mental health professionals	76%	33
Instrument evaluated by mental health professionals	52%	33
Departments where disqualified applicants were hired by another department	44%	27
Departments where disqualified applicants were not hired by another department	56%	27
Departments where disqualified applicants sought a second opinion	18%	33
Number of departments where second opinion resulted in reversal of original decision and subsequent hiring	1	33
Departments where disqualified applicants sought legal action against the evaluation	9%	33
Number of departments where legal action resulted in reversal of original decision with subsequent hiring	0	33

APPENDIX C - CORRELATION BETWEEN PERSONALITY ASSESSMENTS AND OBSERVED PERSONALITIES

Extent of positive correlation	0%	1-32%	33-66%	67-99%	100%
Fire department responses[a]	3%	13%	17%	53%	13%

Note. Extent of positive correlation describes the frequency that a personality assessment matches the subject's observed personality traits. Fire department responses are percentages of the total number of fire departments that answered question number six of the survey instrument (see Appendix A).

[a]n = 27.

APPENDIX D - SUMMARY OF PERSONALITY CHARACTERISTIC RANKINGS

	%	n
Percentage selection of soft skills[a] for the top three priorities	26%	1464
Percentage selection of hard skills[b] for the top three priorities	4%	1464
Percentage selection of 6 specific soft skills[c] within the top three priorities	53%	439
Percentage selection of 4 specific soft skills[d] within the #1 priority	55%	151
Percentage selection of motivation within the top three priorities	59%	94
Percentage selection of attitude in top three priorities	61%	90
Percentage fire departments skipping certifications	26%	99
Percentage fire departments skipping experience	28%	99
Percentage fire departments skipping demonstrated skills	29%	99
Percentage fire departments skipping risk taker	52%	99
Percentage fire departments skipping patriotic	49%	99

[a] These skills are (a) sense of humor, (b) desire to improve, (c) commitment, (d) energetic, (e) persistence, (f) risk taker, (g) caring, (h) high self esteem, (i) motivation, (j) capacity to learn, (k) attitudes, (l) respect for others, (m) problem solver, (n) adaptable, (o) sensitive, (p) moral, and (q) patriotic.

[b] These skills are (a) certifications, (b) experience, and (c) demonstrated skills.

[c] These skills are (a) attitude, (b) motivation, (c) respect for others, (d) commitment, (e) capacity to learn, and (f) desire to improve.

[d] These skills are (a) motivation, (b) attitude, (c) commitment, and (d) capacity to learn.