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**Work values and volunteers: an investigation into the work values of
New Zealand volunteer firefighters.**

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Abstract

Declining populations in smaller rural areas in New Zealand over the past 30 years have resulted in significant reductions in many services and an increased reliance on volunteer labour to provide these services. New Zealand firefighters are predominately volunteers, with approximately 85% belonging to volunteer brigades. The cost of training these volunteers is significant and retention of volunteers is an issue for many brigades. By measuring the importance of work values of firefighters and the level that these values being are met by the firefighting organisations they belong to, this research is endeavouring to investigate person-organisation (P-O) fit via the needs-supplies framework. The Theory of Work Adjustment (TWA) looks at P-O fit and how higher levels of fit result in increased satisfaction with ones' work environment. Satisfaction is theorised to lead to longer tenure. This research measured the work values of 178 volunteer firefighters throughout New Zealand. Results indicated that overall there was good P-O fit between individual and organisational values. Exploratory Factor Analysis (EFA) was carried out on individual and organisational value items in an effort to compare these to the six-factor structure of Elizur's (1984) work. This analysis found resulted in a three-factor structure for individual values and a different three-factor structure for organisational values, suggesting that work values among volunteers may be somewhat different from those in the paid workforce, although this issue needs to be explored further. Higher satisfaction was related to the individual work value factors of pride and self-development and the organisational work values factors of work environment, recognition and pride. EFA was also conducted on the mean value differences between individual and organisational values, and revealed five factors. All factors: work environment, self-development, self-esteem, power and pride, were correlated with increased satisfaction while self-development, power and pride were correlated with lower intentions to leave. Future areas of research are suggested to improve understanding in this field and to assist brigades to retain existing firefighters.

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Chapter 1 Volunteering

Volunteers come from all walks of life, all ages and ethnicities, and involve themselves in a wide range of volunteer activities. As organisations are increasingly obliged to make their finances go further, many look toward volunteers to provide key services and supports (Smale & Arai, 2002). Volunteers may be involved in a wide range of roles including governance, administration, delivery of programs and services, and in the development of initiatives designed to support communities. The focus of the current research will be on volunteer firefighters and work values in New Zealand.

Volunteering, according to Penner (2000), is “the donation of time and effort to some charitable or service organization” (p. 477). Volunteering can be formal or informal (Wilson, 2000). Informal volunteering involves providing spontaneous unstructured assistance, such as helping a neighbour when ill, or picking up a friend’s children from school occasionally (Wilson, 2000). In contrast, formal volunteering is carried out in the context of a commitment to an organisation’s goals and activities, and to undertaking roles set out by the organisation. While informal volunteering can be aimed at helping specific individuals, formal volunteering roles are generally aimed at a category or group of individuals (Penner, 2000). For example, volunteers working for an AIDS/HIV support group are aiming at helping that specific group of people who are affected by AIDS/HIV. Similarly, emergency service workers aim to assist those in need of emergency services, whether it be ambulance, fire service, or search and rescue, their aim is to help people in their time of need.

Many volunteer organisations use volunteers for special events such as annual fundraising or awareness campaigns. For example, the New Zealand Cancer Societies’ Daffodil Day, Pink Ribbon Appeal or Blue September campaigns, to raise funds and awareness for cancer, use volunteers to staff street appeals and public events such as breakfasts or food stalls. As these events are held annually it is the best solution to use volunteers rather than paying staff for a once a year event. Financially it allows all the funds donated to get through to the charity that needs them and it also allows individuals in the community to help the charity in a personally meaningful way.

Other volunteer organisations utilise volunteer labour to ensure that the profits from their fundraising activities can be maximised to provide as many funds as possible to the target

charity. For example, Hospice shops are staffed by volunteers so the funds raised are all available to the hospice, not used up in administration and wage costs. Other organisations, for example the New Zealand Fire Service, have volunteers in smaller communities where they have lower incidents of call-outs and the cost of staffing a brigade with full-time, paid staff would be prohibitive. For example, the New Plymouth, Taranaki brigade had 1495 calls in the 2012/13 year compared with Kaponga (a small rural community in Taranaki) which had 81 calls in the same year.

Not all organisations use volunteers for financial reasons. The Student Volunteer Army (SVA) was formed in response to the September 2010 Christchurch earthquake (Student Volunteer Army, 2010). The SVA started as a Facebook page where people could find information about volunteering and is now an incorporated society. Over 75,000 volunteer hours were donated by SVA members in the aftermath of the second Christchurch earthquake in February 2011. Alongside already established volunteers organisations such as the New Zealand Fire Service and Red Cross, the SVA became an integral part of the Christchurch recovery.

Other organisations use volunteers not only to raise funds but to raise awareness and act as informal ambassadors for the organisation (Elliott & Umeh, 2013). Organisations like Greenpeace, Hospice or the Salvation Army have many volunteers working in local communities not only to assist those in need but to share the message of the organisation, whether it be an environmental, care-related or religious one.

Why individuals volunteer

Through volunteering, people are able to participate in their community (Smale & Arai, 2002). People volunteer for many reasons and these have been classified into numerous groups with differing underlying theories. This research is not using a volunteer theory, it is using a work values theory called the Theory of Work Adjustment by Dawis and Lofquist (1984) which will be covered in detail in chapter 4. However, as the volunteering theories link to work values and the Theory of Work Adjustment they will be covered briefly in this section.

Catano, Pond and Kelloway (2001) stated that “individuals join volunteer organizations because of the compatibility of their beliefs with the values of the organization” (p. 257). This compatibility between personal beliefs and organisational values is investigated in this research. Previous research around work values has shown that values-fit (the fit between an individual's values and those of the organisation) can lead to higher job satisfaction and lower intention to leave. McLennan and colleagues (Cowlshaw, Evans, & McLennan, 2008; McLennan & Birch, 2008) suggested that this theory of work values could be suitable with volunteers as well. This research will be looking at individual and organisational work values and whether these values have close fit and whether this close fit leads to higher satisfaction and in turn lower intentions to leave.

Values fit is not the only motivation for volunteering. Clary, Snyder & Stukiss (1996) identified six functions as motives for volunteering: values, understanding, enhancement, career, social and protective.

People participate in volunteer activities to express and act on values that are important to them. Volunteering allows individuals to express their values. Values, expressed as concern for others, have found to be characteristic of those who volunteer (Anderson & Moore, 1978). Allen & Ruston (1983) found that values distinguished volunteers from non-volunteers and Clary and colleagues (Clary & Miller, 1986; Clary & Orenstein, 1991) found that values predicted whether volunteers would complete their expected period of service. Chacon and colleagues (2011) found that the ‘values’ motive was the most frequently mentioned motivation in their study.

The understanding function, of volunteering means that people see volunteer work as an opportunity to increase their knowledge and skills and to practice the skills that may not be used in their day-to-day lives. In research by Gidron (1978) a large number of the volunteer respondents expected to receive benefits related to self-development, learning and variety in life through their volunteer service. Individuals may also be asked to volunteer because of the skills that they hold, for example, the local accountant may be asked to be treasurer for a community group as they have the required knowledge in that area (McLennan & Birch, 2008).

The enhancement function allows the person to engage in psychological development and therefore to enhance his or her esteem. This function centres on growth and development and involves increasing self-esteem. Research by Anderson & Moore (1978) found that some people volunteer for reasons of personal development and Jenner (1982) also found that individuals volunteer to obtain satisfaction in regard to personal growth and self-esteem.

The career function, indicates that people engage in volunteer work to gain experience that will help them gain their chosen career. Jenner (1982) found that 15% of respondents perceived volunteering to be a means of preparing for a new career or maintaining their career-related skills. Volunteering is an excellent way for young adults to gain some career related skills whilst still at school (Johnson, Beebe, Mortimer, & Snyder, 1998).

There is also a social function, in which volunteering helps individuals to fit in and get along with social groups that are important to them. This function concerns relationships with others. Volunteering offers the opportunity to be with one's friends or to meet new friends. Research with older people by Van Willigen (2000) and Greenfield and Marks (2004) found that older individuals who had experienced the loss of their roles as spouses, parents or employees were more likely to volunteer and benefitted more in terms of psychological wellbeing than those people who had experienced fewer losses.

Finally, there is the protective function in which individuals engage in volunteer work to cope with inner anxieties or reduce feelings of guilt. This function may serve to reduce feelings of guilt over being more fortunate than others or to address one's own personal problems. Frisch and Gerard's (1981) research found that some Red Cross volunteers said that they volunteered to overcome negative feelings.

Other theories of volunteering look at the level of 'Human Capital' an individual holds. Human capital is described by Wilson & Musick (1997, p. 698) as "resources attached to individuals that make productive activities possible". Resources such as education, income and health status are often used as measures of human capital. Research (Andronic, 2014; Bekkers, 2005) has found that those with higher levels of education, higher levels of income and good health are more likely to volunteer than those with no tertiary education, lower income and bad health. Much of this research has been undertaken in the U.S. where tertiary education is more common than, for example, in New Zealand. Along with better health, it

seems likely that those who are healthy will volunteer more than those who are unable to because of ill-health.

Social capital is another theory of volunteer motivation. Social capital refers to the social connections that a person has. Research has shown that the more social connections someone has (e.g., friends, group memberships) the more likely they are to be asked to volunteer by their friends or members of their social group and to volunteer (Wilson & Musick, 1997).

Cultural capital is often measured as a person's level of religiosity (Wilson, 2000). Wilson & Janoski (1995) found marked differences between religious and non-religious volunteers in that those who were religious were more likely to volunteer than those who were non-religious.

Studies (McLennan & Birch, 2008; Wilson, 2000) have shown that motivations to volunteer are complex and there is not just a single reason that individuals volunteer. Regardless of the motivation underlying the volunteer action, there are benefits to be gained by volunteering.

Benefits of Volunteering

Studies by Moreno-Jiménez and Villodres (2010) and Shields (2009) found that volunteers who had higher values fit between themselves and the organisation they volunteered for had higher reported levels of life satisfaction. Higher life satisfaction levels are also associated with better mental health (Briggs, Peterson, & Gregory, 2010; Brough, 2005; Xiao et al., 2014), and better physical health (Jenkinson et al., 2013). However, it could be argued that those with higher life satisfaction, better mental health and better physical health are more likely to volunteer than those with poor health or lower life satisfaction.

It has also been found that volunteers live longer than those who do not volunteer (Wilson & Musick, 1999). Poulin (2014) found that helping behaviour can buffer the effects of stress on health and this could be why volunteers have longer lives. It could also be that those who volunteer are healthier to start with and therefore live longer than their non-volunteering unhealthier counterparts.

Studies with older people have shown that volunteering can help them replace the social benefits that they miss when retiring from the workforce (Omoto & Snyder, 2002; Van Willigen, 2000). Becoming a volunteer allows older people to ensure that their social circle does not shrink or disappear when they are no longer working. When people retire, they may also find that they now have the time to volunteer that they did not have when they were working.

Detriments of Volunteering

Although there are many benefits to volunteering there are also detriments to volunteer work. In a study of Hospice volunteers Elliot and Umeh (2013) found that the volunteers became quite close emotionally to the patients and when the patient died it was quite upsetting for the volunteer. Many felt that the patient had become a friend, or in some cases, like a family member, and the loss was felt quite deeply.

Although vital for community safety, emergency services work can be demanding, threatening, confronting, and dangerous (Corneil, Beaton, Murphy, Johnson, & Pike, 1999) not just physically, but psychologically. Such work is considered by its very nature to be stressful and has been linked to a range of adverse psychological health outcomes, for example traumatic stress symptoms, burnout, and fatigue (e.g., (Alexander & Klein, 2001; Boxer & Wild, 1993; Chamberlin & Green, 2010; Corneil et al., 1999; Huddleston, Stephens, & Paton, 2007). Some recent reports have noted that ambulance officers are increasingly becoming the target of violence when responding to call-outs (Duff, 2015; "Hands off our ambo's," 2016). In a ride-along by Television New Zealand reporters, ambulance staff reported that there had been, on average, 70 cases of physical abuse in the past month. Ambulance staff blamed this increase in violence on drugs and alcohol and stressed that this type of behaviour toward them will see the St John ambulance service lose volunteers and as a result will have a detrimental effect on the public.

Firefighting can also be a dangerous job. U.S. figures show that in 2015, 79 firefighters lost their lives whilst on-duty ("Fallen Firefighters," 2016). In New Zealand, the last fatality was in December 2008 (United Fire Brigades' Association of New Zealand). Fortunately, unlike the ambulance personnel, firefighters have not been the targets of physical abuse. The greatest source of danger generally is contamination from chemical spills or

methamphetamine laboratories (P labs) and traffic danger whilst attending motor vehicle crashes.

Volunteering in New Zealand

In 2013 New Zealand was ranked 8th equal in the world for volunteering time, with just over 1.2 million people undertaking some form of formal volunteering work (Volunteering New Zealand, 2015). The New Zealand General Social Survey carried out in 2012 (Department of Internal Affairs, 2015) found that people in the 65-74 age group volunteered the most at 37.7% closely followed by those aged 45-54. According to other figures released by the Department of Internal Affairs, the percentage of new Zealanders who volunteer their time has increased from approximately 31% in March 2010 to 34.5% in September 2014. Hours volunteered have remained stable at around 10 hours per month over the same period (Department of Internal Affairs, 2015)

Decline in population in smaller communities and rural areas over the last 30 years has resulted in a significant reduction of many services. Without the population base to support them, commercial services such as banks and medical clinics have been unsustainable, as have traditional government services like post offices and schools. This population shift has had an impact, not only on employment but also on volunteer organisations and the general social fabric of small towns throughout New Zealand. Volunteer organisations have struggled to recruit new volunteers to replace those who have moved away for work or family commitments. Retaining existing volunteers has also become an issue, with many also moving to larger centres for work or family reasons. Such trends appear likely to continue and to mean volunteer based groups struggle to find volunteers to replace those who retire or move to find employment (Yoon, Jensen, & Youngs, 2014)

Chapter 2 Firefighting

History of New Zealand Firefighters

The first New Zealand fire brigade was formed in Auckland in 1854 and was comprised completely of volunteers. Starting initially with buckets of water, the brigade soon upgraded to pumps which were provided by the Auckland City Council and insurance companies. A few early fire brigades were sponsored by insurance companies and fought fires only at insured buildings, which were specially marked (Swarbrick, 2012). In 1856 a Wellington Provincial Council regulation required all citizens to keep two buckets of water ready so they could help in case of fire.

The significant cost of privately resourcing New Zealand's firefighting measures led insurance companies to apply pressure on local and central government for the public responsibility of fire management. Together with such initiatives as the Wellington Provincial Council's 1856-1860 Town Protection Act, the impetus for district fire brigades resulted in the formation of the Christchurch Fire Brigade in 1860. They were provided with manual fire pumps donated by Liverpool, London & Globe Insurance Co.

Based on the success of these Brigades, brigades began to form across New Zealand. In 1861, Dunedin's Volunteer Fire Brigade was formed with what is thought to be New Zealand's first career firefighter - Superintendent Robertson. In 1865 Wellington formed its own fire brigade, and Auckland's brigade was reformed on a permanent (career staff) basis after the original volunteer group had disbanded.

In 1878 the United Fire Brigades of New Zealand (UFBA) was founded in Christchurch. Delegates from 9 brigades met at the Lichfield Street Fire Station. Their prime purpose was to establish an organisation that could promote discussion on matters of mutual interest and form better liaison between brigades. Nowadays, the UFBA represents and serves the interests of 525 fire brigades and fire forces throughout the country, comprising more than 10,000 firefighters. The UFBA's services to brigades and members include advocacy; national hose laying and road crash rescue challenges; recognition of service via service honours; accident assurance; a benevolent fund for firefighters experiencing hardship; and

members receive discounts at selected shops, hotels and gyms (United Fire Brigades' Association of New Zealand).

Major fires

In 1907, the first Parliament buildings in Wellington were destroyed by fire. The General Assembly Library next door was only saved by its fire walls and metal fire door.

On the 8th of December 1942, 37 patients died in a fire at the Seacliff Mental Hospital, just north of Dunedin. These patients had been locked in an unsupervised ward. The investigation after the fire resulted in recommendations that automatic fire detection systems and sprinklers be installed in psychiatric hospitals.



Figure 1 Seacliff Mental Hospital, Dunedin, pictured before the fire that destroyed it in 1942. Picture courtesy of Te Ara, Wellington.



Figure 2 Seacliff Mental Hospital, Dunedin, pictured after the fire in 1942. Picture courtesy of Te Ara, Wellington

A massive scrub and forest fire threatened the towns of Taupo and Atiamuri in February 1946. The fire, which took 9 days and 1600 firefighters to bring under control, blocked the Taupo–Rotorua road. This incident prompted the Forest and Rural Fires Act 1947 which laid the basis for the modern rural firefighting system.

On 18 November 1947, a fire broke out in the Ballantynes department store in Christchurch, which took the lives of 41 people. A Royal Commission of Inquiry found that the store and the fire brigade did not take all reasonable steps possible to provide for the safety and escape of the staff and public. They found the local authorities' practices and the effectiveness of fire brigades to be defective. The inquiry's recommendations brought about the Fire Services Act 1949 which was the first attempt to standardise the Fire Service organisation. The Act established the Fire Service Council which represented the Government, insurance companies, local authorities, the United Fire Brigades' Association, and firefighters.

In July 1969, a fire in Sprott House, a nursing home in Wellington, caused the death of seven elderly women residents. The recommendations from the inquiry into this tragic event led to the establishment of The Fire Safety (Evacuation of Buildings) Regulations 1970. These regulations made sprinklers, automatic alarms and evacuation schemes compulsory for institutions housing more than 20 people.

In February 1973, leaking chemical drums that had been dumped caused an emergency known as the Parnell fumes emergency. It resulted in 6,000 people being evacuated from their homes with 643 people treated in hospital, including 41 firefighters. Many were injured from either inhaling fumes or burns from the caustic soda used to neutralise the spilled chemical. The following investigation led to improved hazardous substance procedures and improved co-ordination between brigades.

In 1984 a fire in the ICI chemical warehouse in Auckland caused injuries to 60 firefighters after they came into contact with chemicals. The investigation into the fire resulted in improved clothing for firefighters, standard procedures for fire-ground safety, the introduction of fire-ground safety officers, and changes to the occupational safety and health service.

In 1989 a fire in the Terwindle Rest Home in Auckland caused the deaths of 6 elderly residents. Further fire deaths in rest homes in Fielding and Collingwood in the 1990's led to the New Zealand Fire Service calling for compulsory smoke detectors and sprinklers in Rest Homes.

On the 5th of April 2008, there was a major fire in a cool store at Tamahere, near Hamilton. Highly flammable propane gas, which was used as a refrigerant, leaked and was ignited by electricity. Firefighters investigating the cool store after a smoke detector sounded were caught in the explosion. One firefighter was killed and seven others were seriously injured.

In the early 2000's a major issue was the use of houses as "P" labs to make the illegal drug pure methamphetamine, or P. Very toxic and volatile chemicals are used to 'cook' the drug, which can explode during the cooking process. The processes also leave houses covered with cancer-causing residue, which need to be decontaminated before the house can be reoccupied. Over the past few years the Fire Service has often had to assist the police in dealing with P-lab fires and provide decontamination for every person who has come into contact with the chemicals.

Legislation

Borough Councils were given the authority to adopt measures for fire protection, to appoint Fire Inspectors, and to set up Fire Brigades by the Municipal Corporation Act of 1867. This formed what became the Fire Service's constitution until 1900.

The first piece of New Zealand legislation specifically devoted to fire protection was The Fire Brigades Act of 1906. The Act set up fire boards in urban areas, established the role of Inspector of Fire Brigades, and levied costs on central government, local authorities and insurance companies. The majority of fire legislation that has followed stemmed from this initial Act.

In 1926 the Fire Brigades Act was updated. The new Fire Brigades Act 1926 provided financing for both Fire Districts and Fire Boards. In 1949 however, as a partial response to the disastrous Ballantyne's Fire in Christchurch of 1947, the Fire Services Act established the Regional based Fire Service Council with Chief Fire Officer, Secretary and officials. This was superseded in 1975 with the passing of the Fire Services Act, a significant development in the evolution of the New Zealand Fire Service as it is understood today. The Act established the New Zealand Fire Service Commission which was charged with restructuring the Fire Service from under local authority management into a service with centralised financial and strategic control. On 1 April 1976, all fire authorities were dissolved and the New Zealand Fire Service Commission was vested with full responsibility for the Fire Service throughout New Zealand.

In 1954 a Fire Service Regulation, Code of Practice, and Co-ordination Scheme were created to promote extended co-operation between brigades. This paved the way for the Fire Service training school to open in 1957 in Island Bay, Wellington and was for all ranks of firefighters, both volunteer and career. Also in 1954 a major policy and Code of Practice was agreed with the Post and Telegraph Department on a single emergency number. Then in 1956 an automatic telephone exchange was set up in Masterton. Masterton and Carterton were the first to introduce the 111-emergency number on September 29, 1958.

Training & Equipment

In 1865 the Dunedin brigade used the first horse-drawn steam fire engine. In the late 1870s the first use of 'jumping sheets' was recorded. Jumping sheets were used to catch people leaping from burning buildings.

In the 1880's the Fire Brigade Drill Book was written and published in New Zealand by the Ashburton Volunteer Fire Brigade, and was still used by brigades until the late 1990's. The drill book held almost everything a new firefighter needed to know to attend a fire call; information on how to tie knots and use lines, duties of crew members (initially in five-man, then in four-man crews), where crew members sat in the fire appliance, running out the hoses, shipping standpipes, and ladder drills. The drill book was retired in the mid 1990's when the new Training and Progression System (TAPS) was introduced. The TAPS system is a combination of practical (on and off-station) and theory learning, using TAPS manuals, that takes new recruits and experienced firefighters through a series of modules on particular topics. These range from the basic skills for new recruits to more advanced learning such as Pump Operation and Brigade Driver.

In 1903 the first motorised fire engine in Australasia, a 'Merryweather Automobile Steam Fire Engine', became the pride of the fleet for the Wanganui Fire Brigade. Three years later Wellington and Auckland also took possession of these 'self-propelled' machines.

In 1913 a member of the Dunedin City Brigade invented a new system of street fire alarms. In the event of a fire a box on a lamp post would have its glass smashed by a member of the public. This sent a signal to a switchboard operator who then sent a fire engine to the address indicated by the location of the signal. This was to be the main system in New Zealand for the next 50 years. By the time these alarms were installed all major brigades in the country were completely motorised. Even as late as the 1970's this alarm system was still being used in some towns. In 1991, when this author joined the Kaponga Volunteer Fire Brigade, the Brigade still had one of these manual alarms on the front of the Fire Station, in addition to the automated 111 system.



Figure 3. Members of the Whanganui fire brigade pose with their Merryweather fire engine (right) and a modified Model T Ford, in 1919. Used with permission of the Alexander Turnbull Library, F. J. Denton Collection. Reference: 1/1-020869; F. Photograph by Frank J. Denton

In 1970 the first ‘snorkel’ appliance was deployed to Wellington. Now known as a ‘Type 5’ appliance, the snorkels offered greater command and control when fighting fires in tall buildings – a necessity as the urbanisation of New Zealand continued.

The beginning of the 1980s saw great changes begin in the New Zealand Fire Service. In 1981 the Fire Incident Reporting System was introduced as a pre-cursor to today’s ICAD Reporting System. In 1985 the New Zealand Fire Service purchased its first computers and now all New Zealand stations are equipped with a computer and internet access giving firefighters instant access to notifications and making the completion of incident reports quick and easy.



Figure 4. 1971 Darley International Snorkel (Type 5) fire appliance. Photo courtesy of The Museum of Transport and Technology (MOTAT).

In 2006 the National Training Centre was opened in Rotorua. The centre has the latest state-of-the-art training tools and is the international benchmark for fire-training facilities. In 2008 the New Zealand Fire Service joined in the 50-year celebration of the 111-emergency phone number.

New Zealand Fire Service

The early history of the New Zealand Fire Service is marked by the development of insurance companies. Specifically, during the period between 1840-1860, fire insurance companies imported manually operated water pumps that were used to fight fires on the premises of companies they insured.

The Fire Service Commission was created in 1974/75 and was set up with three full-time members. The commission abolished the 277 local authority fire boards, took over control of all brigades, and formed the New Zealand Fire Service. Forming the New Zealand Fire Service allowed centralised standards and controls. Initially two of the commissioners were Fire Officers with a chairperson being appointed from outside the Fire Service.

In 1990 the Fire Service Amendment Act changed the make-up of the Fire Service Commission to be composed of three part-time commissioners appointed from outside the Fire Service, and the Secretary for Internal Affairs. The roles of Chief Executive, National Commander, and National Rural Fire Officer were created. In 1995 a major restructure followed 18 months of investigation. Regional and area structures changed from six regions and 20 areas to become three regions and 11 areas. In 1997 the New Zealand Fire Service was restructured into eight fire regions with a corporate office and a National Service Centre. In the early 2000's the NZFS was again restructured and became five fire regions with the National Office in Wellington. New policies and key objectives were identified to focus on fire prevention, risk management, and community responsibility for fire safety.

Community Awareness and Education

In 2001 the New Zealand Fire Service launched 'Firewise', the flagship fire education programme. The programme was targeted at Years 1 and 2 students and Years 7 and 8 students. The programme, with some changes, is still in use in schools today.

In 2002 a series of fatal house fires in Northland led to the establishment of Te Kotahitanga which is an interagency programme with Work and Income New Zealand, Housing New Zealand, ACC and People Potential. Northlanders, under the Taskforce Green programme, were trained to become 'fire safety advisors'. These advisors visited 'at risk' communities providing fire safety advice, installing smoke alarms, and helping households complete escape plans.

In 2003 the 'Speed of Fire' advertisement was launched showing people how quickly fire spreads. This advertisement won a Gold Award at the Cannes International Advertising Awards (Swarbrick, 2012). The success of the advertisement is still felt today.

In March 2008, a new television campaign was launched to raise fire-safety awareness in New Zealand. The advertisements feature firefighters giving 15-second safety messages that help prevent fires in the home (New Zealand Fire Service, 2015a).

Firefighting in New Zealand

Firefighters in New Zealand attend over 73,000 call-outs per year, which include structure fires, medical call-outs, motor vehicle accidents, vegetation fires and hazardous material calls (New Zealand Fire Service Commission, 2014). Fire brigades are divided into Career and Volunteer brigades and are under the control of the New Zealand Fire Service (NZFS) which is a Crown entity that is charged with protecting lives and property from fire. The NZFS's principle role is to reduce fire incidents and reduce the consequences of fire. This includes reducing the negative impacts of fire for people, property, the community as a whole and the environment. The NZFS also responds to non-fire related incidents, which include medical emergencies, motor vehicle incidents and hazardous emergencies. The latter includes earthquake and flood related incidents as well as hazardous material spills. The NZFS protects the urban fire districts and urban centres while the National Rural Fire Authority (NRFA) is responsible for fire protection outside these urban fire districts (National Rural Fire Authority, n.d.). In addition to the urban and rural fire brigades, all major airports have fire services and there are also several hundred industrial fire brigades at freezing works, timber and steel mills, oil refineries and large factories throughout New Zealand.

The NZFS is divided into five regions (as shown in Figure 5) and these areas are under the command of a Regional Manager. Firefighters are organised into brigades, which can range from six to 50 firefighters and are led by a Chief Fire Officer (CFO). All firefighters carry rank, which begins with probationary firefighter when they first join a brigade, up to Chief Fire Officer for each brigade. Each CFO will have a Deputy Chief Fire Officer (DCFO) and several Senior Station Officers (SSOs) and Station Officers (SOs) reporting to them. The minimum number of firefighters required to man an appliance is four – an officer-in-charge, a driver/pump operator, and two firefighters – although most appliances are equipped to carry an extra two firefighters. Firefighters are divided into volunteer brigades, which cover smaller urban centres, and full-time career stations, which are situated in larger urban centres. Career staff and volunteers often work together at large call-outs and all brigades may work with ambulance and police staff depending on the call-out.

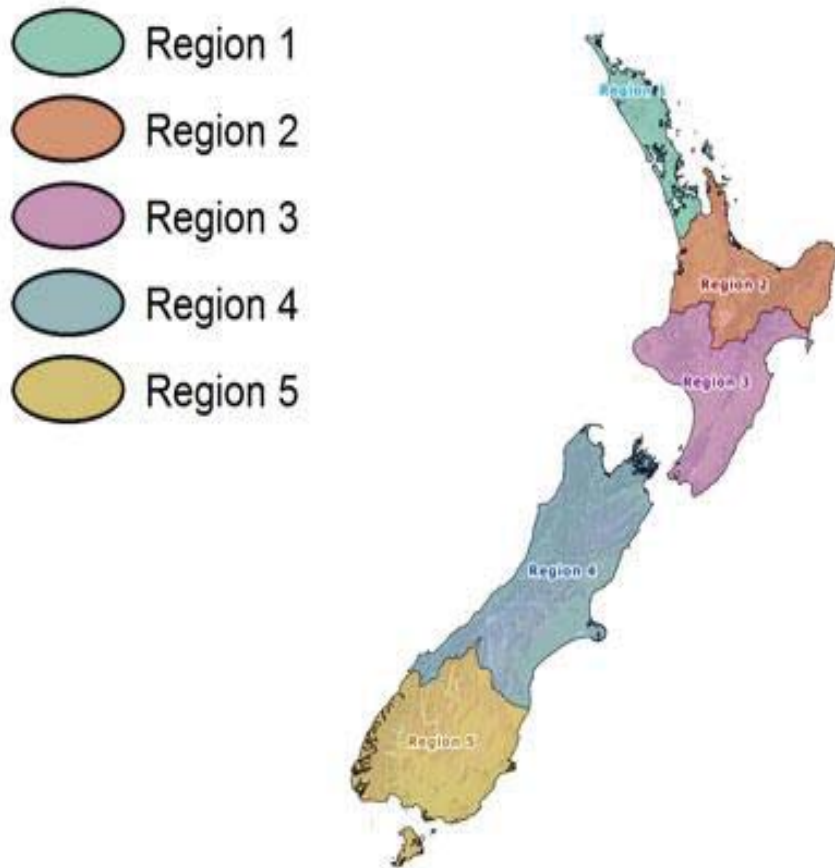


Figure 5. Fire Service Regions

Career Firefighters

The New Zealand Fire Service employs over 1700 professional career firefighters, 444 support staff and 80 communication centre staff (New Zealand Fire Service Commission, 2014).

Each career fire station has several shifts. Full-time career stations have four shifts, rotating on a "four-on four-off" schedule: two 10-hour day shifts, followed by two 14-hour night shifts, followed by four days off. Non-operational staff are "black watch" which is a normal working day (e.g., 8 am to 5 pm), and work a regular 40-hour week. Career Firefighters respond to 70–80% of the incidents the NZFS attends and protect 80% of the population (New Zealand Fire Service, 2015b).

Career firefighter numbers are relatively stable with low turnover. The Fire Service usually recruits twice-yearly, and can receive up to 700 applications for 48 positions on each intake. Initial training for career firefighters is done on an intensive 12-week course at the national training centre in Rotorua that covers not only traditional firefighting subjects but urban search and rescue (USAR), motor vehicle extrication and hazardous materials.

Career firefighters make up only 20 percent of the New Zealand Fire Service's firefighting manpower; the remaining 80 percent of firefighters are volunteers who receive no payment for their time or labour. The 8,300 volunteer firefighters belong to the 360 volunteer fire brigades, mainly serving small towns, communities and outer suburbs which career stations do not cover, and respond to 20–30% of all incidents the New Zealand Fire Service attends.

Volunteer Firefighters

Volunteer firefighters come from diverse backgrounds. Around 14 percent are women, compared to just 2.8 percent in the career ranks. Volunteers are on-call; when an emergency call comes through, firefighters are alerted through pagers and a siren atop the fire station (New Zealand Fire Service, 2014).

The minimum age to become a volunteer firefighter in the New Zealand Fire Service is 16, although those under 18 require parental consent. Initial training is done within the local volunteer fire brigade at weekly training nights and all operational firefighters complete a seven-day recruit course, normally held at the National Training Centre (NTC) in Rotorua or the Woolston Training Centre in Christchurch. Training includes hose drills, ladder drills, portable pumps, and breathing apparatus use (BA), which is carried out in BATB (Breathing Apparatus Training Building) and RFTB (Realistic Fire Training Building) simulators. The BATB is a gas-fired training facility and the RFTB is a live fire scenario. Firefighters are also involved in public awareness and fire safety campaigns in their local community and are available to assist people with fitting smoke detectors and devising escape plans for their home or place of business.

Alongside operational firefighters are the roles of Operational Support and Brigade Support volunteers. Operational support volunteers provide non-firefighting assistance such as traffic and crowd control at call-outs. Brigade support include roles such as brigade treasurer and brigade secretary as well as personnel who organise uniforms, input incident information and assist senior officers with compliance work.

Retention of Volunteer Firefighters

For existing volunteer firefighters, work demands and family commitments can lead to resignations (Lewig, Xanthopoulou, Bakker, Dollard, & Metzger, 2007). In the United States, membership rates of volunteer firefighters show a downward trend and range from a high of 8.05 in 1987 to a low of 6.37 in 2011 per 1,000 population protected (Haynes & Stein, 2014). In their research on Australian rural volunteer firefighters, McLennan and Birch reported that volunteer membership had declined by about 30% over the period 1988 – 2004 (McLennan & Birch, 2005; McLennan, Birch, Cowlshaw, & Hayes, 2009). The authors noted that changes in the global economy have led to changes in the structural nature of work, which is also evident in smaller centres in New Zealand. For the period 30 June 2009 - 30 June 2010, the average annual staff turnover of all NZFS volunteers across regions was 10.7%. This equates to an average of 105 people leaving the NZFS from each region per annum (New Zealand Fire Service, 2011).

The loss of knowledge and skills can become a major factor for some brigades, particularly those with smaller numbers, as well as the costs of training and providing a full kit to new volunteers. PricewaterhouseCoopers (2009) made a conservative estimate that the economic value attributable to volunteer fire brigades in small communities (based on 169 stations) is \$79 million per annum. Two thirds of this value are the result of responses to medical emergencies and one-third from fire responses. Retaining firefighters becomes even more important when one takes into consideration the economic, social and human cost of losing brigade members.

Volunteer firefighting includes challenges often not faced by their professional counterparts. Research carried out by Bryant and Harvey (1996) found that Volunteer Firefighters (VFF) face high levels of work-related risk comparable to that experienced by professional firefighters. These challenges include knowing the victims of a house fire or motor vehicle

accident; being 'on-call' constantly; and the difficulty of managing work, family and firefighting commitments (O'Neil & Wagner, 2012; Yarnal & Dowler, 2002). Research carried out in New Zealand with volunteer firefighters from smaller communities said the emotional strain could be particularly hard, as they often have to deal with incidents involving people they know and this strain can impact on their retention in the brigade.

The current research

In early 2015, Taranaki Area Commander Pat Fitzell spoke to the Taranaki Daily News and stated that almost every volunteer brigade in the region needed more members (Smith, 2014). Fitzell also said the job had changed significantly since he started and fire callouts made up only five per cent of what they did. "We're doing things like medical calls, crashes and natural disasters like the flooding the other night." This change from purely firefighting to fire and rescue services may have had an impact on retention and recruitment of new members. This was reiterated in research carried out for the New Zealand Fire Service by UMR Research (2001) when participants stated "others may dropout when they realise they will have to attend non-fire incidents like MVAs [motor vehicle accidents] (p. 31)". It seems that the changed nature of the job deters a number of people from volunteering.

The current research will investigate the fit between individual and organisational values, levels of job satisfaction and intentions to leave among volunteer firefighters. To date, and to this author's knowledge, there has been little or no research carried out with volunteer firefighters in New Zealand regarding their individual or organisational values. As fit between individual and organisational values is an important predictor of job satisfaction and tenure (Dawis & Lofquist, 1984) it is hoped that the information from the current research will help Chief Fire Officer's (CFO's) retain existing members.

Retention of firefighters is crucial to the brigade itself and the community. It has not only a human and social value, but also a real economic value to the communities they serve. Satisfaction has been found to relate to retention through the fit of individual and organisational values. Research has shown that satisfaction is an important part of an individual's working experience. Posner's (2010) work in this area has highlighted that where there are differences between personal and organisational values, dissatisfaction with the job is higher as are turnover and stress levels. Perrewe & Hochwarter's (2001) research

found that individuals may feel less satisfaction not only with work but in other areas of their lives, and Srivastava (2011) found that work values had a stronger association in predicting satisfaction than personal values.

The importance of values match, in relation to satisfaction, should not be ignored. "A sense of common values is mandatory for cooperation" (Freedman, 2004, pp. 380-381). This dependence on others for your own safety, and others depending on you, is an essential element in being a firefighter (Perkins & Metz, 1988). It is theorised in this research that if firefighters have similar personal values this should help to create the kinship and trust that is required and therefore lead to higher satisfaction levels and longer tenure.

Chapter 3 Values and Work Values

Work values have been found to be linked to various work-related constructs, including job satisfaction (Locke, 1976), and employee turnover (Mowday, Porter, & Steers, 1982). Values are central to the degree of satisfaction individuals find when they 'fit' a particular work environment (Rounds, Dawis, & Lofquist, 1987). To understand how values are linked to satisfaction, turnover and fit, a clear understanding of what constitutes values and work values is essential. The following sections explain these concepts.

Values

There is widespread debate over the definition of values. Values have six features that are generally agreed upon: values are enduring; they are a belief; they pertain to a desirable end state or mode of conduct; they transcend specific situations; they guide evaluation of behaviour, people and events, and; values are ordered by importance relative to other values to form a system of value priorities (Judge & Bretz, 1992; Kluckhohn, 1959; Levy, 1984; Rokeach, 1973; Schwartz, 1994; Schwartz & Bilsky, 1987).

The enduring feature of values according to Rokeach (1973) "arises from the fact that values are initially taught and learned in isolation from other values in an absolute all-or-none manner" (p. 6). We are taught to be completely honest, not just honest sometimes or that an end-state (e.g., happiness) is always preferable to an opposite (e.g., un-happy) end state, so this absolute, one-or-the-other learning of values almost guarantees their endurance and stability. Gradually as people mature they learn to integrate the values that they have been taught into an organised system in which each value is ordered in priority relative to other values, thus creating their own value system. Value systems, and the values within the systems, can change over time depending on one's exposure to cultural and institutional values, intellectual development, political and religious identification and identification with sex roles (Parry & Urwin, 2011; Sagie, Elizur, & Koslowsky, 1996).

Values as beliefs have cognitive, affective and behavioural components to them. An individual cognitively knows the correct way to behave, they can feel emotional about it and values can act as an impetus to action (Rokeach, 1973). Values transcend specific situations in that one value may be suitable to many situations. For example, the value of responsibility

can be relevant to personal life, e.g., responsibility for one's children; work life, e.g., responsibility for work projects; social life, e.g., responsibility towards maintaining friendships; and spiritual life, e.g., the responsibility to act as your religion expects.

Rokeach (1973) divides values into terminal and instrumental values. Terminal values are end states of existence; they are personal and social. For example, self-centred values could be salvation and peace of mind, whereas society-centred values could be world peace and brotherhood. As personal values increase social values decrease and vice versa. Instrumental values are modes of conduct and are further split into moral and competence values. Moral values refer mainly to modes of behaviour. They refer to certain kinds of values; those that arouse pangs of conscience or feelings of guilt. Competence values are personal rather than interpersonal. They arouse feelings of shame about personal inadequacy rather than feelings of guilt. For example, being honest and responsible leads a person to feel they are behaving morally, whereas behaving logically and intellectually leads a person to believe they are acting with competence.

Values also guide evaluations of events, people and behaviour. Values serve as a 'yard-stick' for an individual to measure their behaviour against that of others and to decide whose behaviour is right or wrong in their mind. Values of the instrumental-moral type lead to feelings of guilt if they are violated and evaluating these values before embarking on a route of behaviour can stop these values from being violated (Chatman, 1989; Judge & Bretz, 1992; Posner, 2010; Rokeach, 1973).

The above six features distinguish values from attitudes, social norms and needs (England, 1975; Locke, 1976; Rokeach, 1973). For example values, according to England (1975), are like attitudes, but more ingrained, permanent and stable. Rokeach (1973) concurs and sees that values are determinants of attitudes because values are more central within an individual's cognitive system. Rokeach goes on to say that attitudes are different from values because attitudes number in the thousands, whereas values number in the dozens and values transcend objects and situations, whereas an attitude is focused on a specified object or situation (Rokeach, 1973).

Social norms are specific to situations whereas values transcend all situations and values are more personal and internal whereas social norms are external. Social norms, according to Rokeach (1973), only refer to modes of behaviour, not end-states as values do.

Needs are 'objective' in that they exist regardless of what the person wants. Values are 'subjective' in the sense that they are in the persons conscious or sub-conscious mind. In short Locke (1976) argues that needs are inborn, whereas values are learned. Rokeach agreed with Locke in that needs and values are different, but he argues that every being has needs, but only man has values. For example, a rat has needs (e.g., food, shelter, warmth) as does a man, however, the rat does not feel guilty if he has stolen the food or shelter from another rat, whereas, a man (should) feel guilty if he has stolen from another man. Maslow (1958) takes a different point of view of values and needs. In his hierarchy of needs, values are included in the section called self-actualisation and he sees values and needs as one. So here Maslow is saying that values and needs are interchangeable. Another alternative view is that of Dawis and Lofquist (1984) who see values as a manageable way of describing an individual's various needs. Their purpose was to condense many needs down into fewer values, or value categories, so that they could be measured in an effective manner. Posner (2010)) has another view of distinguishing values and needs. He sees values as at the “core of who people are” (p. 457). Values are deep-seated and are unable to be seen physically. They are only seen in the way they manifest themselves (e.g., in opinions, preferences, desires or fears) and they quietly give direction to the hundreds of decisions that are made at a personal and organisational level every day (Posner, 2010).

Work values

The importance of values in today's working environment cannot be ignored. Pruzan (1998) stated that values are a critical management tool now that the post-industrial economy is inhabited by 'knowledge workers'. The traditional hierarchical control systems are no longer effective or productive and what is needed now is a value-based management approach. This approach inspires and motivates workers by creating meaningful goals that fit their values (Anderson, 1997). Knowing which work values are important to the workers allows managers to anticipate how workers will react to changing work environment or different assignments within the work environment.

Like personal values, the definition of work values is also debated among researchers. Some researchers do not distinguish between personal and work values, but discuss values in a work context (Dawis & Lofquist, 1984; Super, 1970). Others categorise work values on their desired outcomes (Elizur, 1984). Many use a similar definition as personal values but refer to values in the work context (Schleicher, Hansen, & Fox, 2011). The most relevant of the work value definitions will be discussed here briefly.

Schleicher, Hansen and Fox (2011) provided a simple distinction between personal values and work values: "Personal values (the subject of Rokeach's original research; 1968) refer to prioritized standards or beliefs that people hold (and which guide decisions) about life in general. Work values, in contrast, refer to prioritized standards or beliefs that people hold (and that guide decisions) about their life at work" (p. 140). In other words, they are saying that personal values are about life in general and work values are about life at work.

Super (1973) defines work values as goals that an individual seeks to attain to satisfy a need. He states that work values derive from needs and are more general than interests. Super divides work values into six factors: material success, conditions and associates, altruism, heuristic-creative, achievement-prestige, and independence-variety.

In a similar definition Dawis and Lofquist (1984) defined work values as a manageable way of describing needs, in that the commonalities underlying needs were grouped together to provide what they called value dimensions. Dawis & Lofquist (1984) make it clear that when they are referring to needs they mean in relation to the individual's work environment, not physical needs such as food and shelter, but psychological needs such as using one's abilities or being praised for a job well done. The need is the individual's requirement for a reinforcer, and the individual receives this reinforcer from their work environment. Dawis and Lofquist (1984) also categorise work values into six areas: safety, autonomy, comfort, altruism, achievement, and aggrandizement.

Tziner & Elizur (1987) define work values as the importance individuals give to a certain outcome obtained at work. This definition is looking at what comes from work, for example, satisfaction, pay or achievement. It is similar to Dawis & Lofquist's definition of a reinforcer, where the employer provides reinforcement intended to stimulate and maintain appropriate behaviour at work by the employee.

Further work by Elizur and colleagues (Elizur, Borg, Hunt, & Beck, 1991) divides work values into modality of outcome and focus of the values. There are three modalities: material, affective or cognitive, and two foci; diffuse or focused. The material mode refers to items that have a concrete or practical consequence such as pay or job security. The affective mode is the expression of feelings within the context of interpersonal relations, e.g., esteem from co-workers or supervisor fairness. The cognitive mode involves values that refer to opinions or beliefs e.g., interesting work or accountability. The focused type of value is one that is associated with specific behaviours or situations, similar to Rokeach's (1973) instrumental values, for example, money, good friends and recognition for performance. The diffuse foci are not necessarily associated with specific situations but are more general in nature therefore relevant to a variety of situations e.g., meaningful life or work or contribution to society.

The present research is based upon Dawis and Lofquist's (1984) definition of work values: work values are made up of a group of psychological needs that share commonalities. They impact on the individual in a negative or positive way in their work environment depending on whether these values are met by reinforcer provided by the work environment or whether they are not met by the work environment. This definition will be discussed further in Chapter Five, the Theory of Work Adjustment.

Classifying work values

Many researchers have attempted to define, measure and classify work values (e.g., (Elizur, 1984; Gay, Weiss, Hendel, Dawis, & Lofquist, 1971; Lyons, Higgins, & Duxbury, 2010; Super, 1970). The most widely used approach classifies work values as intrinsic or extrinsic to the individual (Elizur, 1984; Herzberg, 1968; Super, 1970).

Intrinsic, or cognitive (Elizur, 1984), work values refer to work values that relate to the inherent psychological satisfaction of working. They are internal to the individual. Items such as interesting work, challenging work or varied work are items that have been classified as intrinsic.

Extrinsic, or instrumental (Elizur, 1984), work values refer to those values that are outside the individual. They relate to material aspects of working such as pay, benefits and job security (Elizur, 1984; Ros, Schwartz, & Surkiss, 1999).

However, the adequacy of the intrinsic-extrinsic dichotomy has been questioned (Dyer & Parker, 1975). There is discrepancy in the ways that the labels 'intrinsic' and 'extrinsic' are applied. In research carried out by Dyer & Parker (1975) respondents were asked to classify items into either extrinsic, intrinsic, both intrinsic and extrinsic, or neither intrinsic nor extrinsic. Thirty-five percent of the respondents classified intrinsic outcomes as those deriving from the task itself (e.g., interesting work), 25 % classified them as outcomes that are self-administered (e.g., personal growth), 14% as outcomes that are in the form of subjective or intangible feelings (e.g., feelings of worthwhile accomplishment) and 8% as outcomes that satisfy higher order needs (e.g., self-esteem).

Greater agreement was found with the definitions of extrinsic outcomes. Forty-five percent of the participants indicated that extrinsic outcomes are those that derive from the context of the job (e.g., salary) and 24% said they are outcomes that are externally mediated (e.g., working conditions).

The most interesting results that Dyer and Parker found was that the values of recognition, responsibility, advancement, stress or pressure and authority were classified as either intrinsic or extrinsic. Feedback received from some participants admitted that the difficulty in classifying the items was due to the differences between job incumbents and job situations. (Dyer & Parker, 1975). This confusion has led to a lack of consistency in the ways in which researchers have defined intrinsic and extrinsic value categories which, in turn, has made it difficult to compare studies.

Another issue which arises with the extrinsic/intrinsic dichotomy is that it is far too narrow for such a large field of study (Billings & Cornelius, 1980). Many researchers (Alderfer, 1972; Borg, 1990; Crites, 1961; Elizur, 1984) have found evidence for additional categories. Suggestions including altruistic or relational categories have been made as has the inclusion of prestige or status-related items (Ros et al., 1999). Values such as work/life balance, freedom and social/friendship have been excluded from some inventories, and measures

designed between the 1960's and 1980's may not accurately reflect changes in the nature of work over the decades.

Although the issue of categorisation has received attention from researchers, little has been done to represent the changes in work and work values over time. In answer to the above criticisms, Lyons (2003) created a 31-item scale which used existing concepts in the literature and added much-needed contemporary work values. The new scale has a six-factor solution which includes intrinsic, extrinsic, status and altruism-related work values and adds freedom and social work values which are relevant to modern work situations. This scale was added to by Cennamo and Gardner (2005) and is used as the basis for this research. If volunteer values are similar to work values, then we will expect to see the same six factors emerge in the current research. However, if volunteer values are considerably different, a unique set of factors will emerge.

Chapter 4 Person-Environment Fit

Person-Environment Fit

Person-Environment (P-E) fit is defined as "the compatibility between an individual and a work environment that occurs when their characteristics are well matched." (Kristof-Brown, Zimmerman, & Johnson, 2005, p. 281). Fit can exist on any range of personal attributes (e.g., values, goals, or knowledge, skills and attributes (KSA's)) and attributes of the environment (i.e., job demands, working conditions and rewards). P-E fit is based in interactional psychology which is concerned with the relationship between the individual and the environment.

What is 'fit'?

Fit can be defined in two ways (Muchinsky & Monahan, 1987); supplementary or complementary. These types of fit refer to whether the person supplements or complements the environment.

Supplementary fit is described by Muchinsky & Monahan (1987) as occurring when an individual "possesses characteristics which are similar to other individuals in this environment" (p. 269). For example, when an individual joins a fraternal organisation; they choose that organisation because they see themselves as having the same values, tastes and interests as those already in the organisation. They perceive themselves as 'like-minded' to those already in the organisation. In this definition, the environment is defined by the people in it, and the individual sees themselves as fitting in with those people, which could be called a person-person fit.

Complementary fit is defined as "the characteristics of an individual serve to 'make whole' or complement the characteristics of an environment" (Muchinsky & Monahan, 1987, p. 271). In this type of fit, the individual brings skills or knowledge to the environment that it is lacking. The need of the environment is offset by the strength of the individual. For example, a dominant leader may be selected for a work group that is in disarray.

The main differences between the complementary and supplementary models is the environment. In the supplementary model, the environment is described according to the people who are in it, on the other hand in the complementary model the environment is defined according to its demands not its inhabitants (Muchinsky & Monahan, 1987).

Fit to what?

Kristof-Brown and Guay (2011) identified four main areas of P-E fit. Firstly, person-vocation (P-V) fit, which is the broadest aspect. In this aspect, fit is determined by assessing the individual's personality and that of the vocational environment to gauge similarity. For example, an individual who has personality traits which involve helping others may choose a vocation in the helping professions such as a doctor, nurse or psychologist. Super (1973) suggested that people choose an occupation based on its congruence with their self-concept. In other words, what do we see ourselves as, in terms of a vocation? Do we see ourselves as a nurse, psychologist, teacher? The vocation that is closest to our self-concept is the best one for us to choose if we are to get the best P-V fit.

The second area of P-E fit theory is person-job (P-J) fit. P-J fit looks at the compatibility of individuals with specific jobs. The fit should be judged relative to the tasks performed, not the organisation in which the job exists. For example, a retired Olympic swimmer would fill the job requirements and have a better PJ fit as a swimming coach than would this author, who swims badly. This type of P-E fit includes needs-supplies fit and demands-abilities fit in relation to the job (not the organisation) in that the abilities of the individual match the demands of the job and the needs of the individual are met by the job.

The third area is person-organisation (P-O) fit, which refers to the compatibility between the employee and the organisation, generally with respect to value similarity (Chatman, 1989; Kristof, 1996; Verquer, Beehr, & Wagner, 2003). The most frequently used measure is the congruence between the individual's values and the organisation's values (Chatman, 1989), however there is also the measurement of organisational and individual goals and the 'demands-abilities' and 'needs-supplies' measures of the Theory of Work Adjustment (Dawis & Lofquist, 1984). Demands-abilities is a measure of the demands and requirements of the work environment and the knowledge, skills and abilities (KSA's) of the individual. Needs-supplies is the measure of the needs or values of the individual and the reinforcers or supplies

that the work environment provides. When demands-abilities and needs-supplies measures fit well they lead to good P-O fit.

The fourth aspect of P-E Fit is person-group (P-G) fit which focuses on how an employee fits with work groups or other teams, including co-workers. Person-group fit also focuses on the compatibility of any individual's skills, personality and personal relationships with their work group (Higgins & Sekiguchi, 2006; Kristof, 1996).

This research is in the area of P-O fit, with focus on the Theory of Work Adjustment needs-supplies fit framework. The concept of P-O fit is of particular concern in this research as there is a considerable amount of time and money invested in training a new firefighting recruit. Keeping volunteers in brigades saves time and money and is also good for morale and for the community that the firefighters serve.

How much fit?

There are differing opinions on what constitutes 'good' or 'right' fit. It is argued by some that any deviation from perfect fit is unacceptable, yet others claim that some misfit can be classed as good (Edwards, Cable, Williamson, Lambert, & Shipp, 2006; Su, Murdock, & Rounds, 2015). For example, better pay than needed does not necessarily equate to bad fit, however it could still be classed as misfit.

In teams, misfit can be helpful because it can help to stop the 'groupthink' phenomenon (Kristof-Brown et al., 2005). Having people in a team who are different from each other brings together new and different ideas to help the team remain dynamic. However, poor fit can make a person leave an organisation or group (Ahmad, 2012). This mainly depends on how large the gap is between organisational and individual values and whether the value is of high importance to the individual. It is generally recognised that good fit will increase satisfaction and therefore increase tenure (Kristof-Brown et al., 2005)

Chapter 5 The Theory of Work Adjustment

Introduction

The Theory of Work Adjustment (TWA) was first published in 1964 by George W England, René V. Dawis and Lloyd H. Lofquist, who developed the TWA in the context of the Work Adjustment Project, a continuing research program in the Department of Psychology at the University of Minnesota. (Dawis, 1980).

The Theory of Work Adjustment is based on the interaction of an individual and their work environment. The individual has knowledge, skills and attributes (KSA's) and needs, values and personality traits (Section A in Figure 5). The work environment has job requirements and provides rewards and reinforcers for the individual (e.g., pay, good working conditions; Section B in Figure 5). When the KSA's meet the job requirements satisfactoriness is said to have occurred, or 'demands-abilities' fit. When needs, values and personality traits are reinforced or rewarded by the work environment, satisfaction is said to have occurred, or 'needs-supplies' fit (Part C in Figure 5). Both demands-abilities and needs-supplies fit together are said to predict tenure. When both have a high level of fit, tenure is expected to be longer, when both have low or misfit tenure is expected to be shorter. Dawis and Lofquist (1984) used the term correspondence when referring to the fit between the individual and the work environment. This term is not used in this research as it has been criticised for being too broad (Murphy, 1993) which has led to a "wide variety of operationalisations, none of which is entirely satisfactory" (p. 100). The term has also become dated and the term's P-O fit, needs-supplies and demands-abilities are the terms in use today. The TWA also describes an ongoing process of adjustment between the employee and their work environment which is not investigated in this research.

Figure 5 can be described simply as: when A and B fit, they create C which in turn results in D.

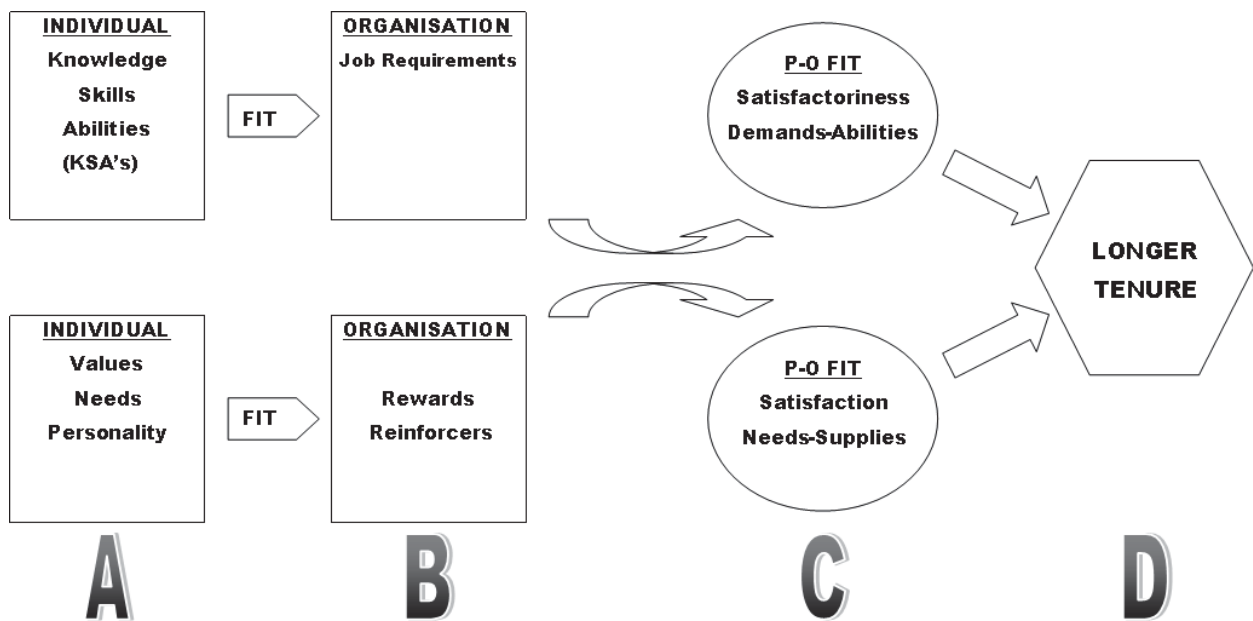


Figure 6: Flowchart of the Theory of Work Adjustment. Adapted from "A Psychological Theory of Work Adjustment", by R. V. Dawis & L. H. Lofquist, 1984.

As P-O fit increases, the probability of tenure also increases. If an individual has substantial tenure it can be inferred that the abilities and values of the individual are being met by the work environment, and the requirements of the work environment are being fulfilled by the worker.

Satisfaction is experienced by the individual when their requirements are fulfilled by the work environment. Satisfactoriness is experienced by the work environment when its requirements are fulfilled by the worker. Different individuals will respond to different reinforcers and different reinforcers have varying levels of reinforcement strength.

Research on the Theory of Work Adjustment

Dawis & Lofquist presented 17 formal propositions for research hypotheses. Three relevant propositions are discussed here. In addition to research carried out on each proposition of the TWA, there has been a considerable body of work carried out on specific constructs, such as satisfaction, with a large variety of ethnicities and cultures. It was estimated in 1993 that there had been over 200 articles stimulated by the theory (Bizot & Goldman, 1993) and more have been presented since then. Along with a great amount of research, the Work

Adjustment Programme also developed psychometric instruments to measure the constructs of needs and values and of satisfaction.

Proposition III of the TWA states that satisfaction is a function of the correspondence between the reinforcer pattern of the work environment and the individual's values. Elizur and Tziner (1977) studied twenty work aspect satisfaction scores and their corresponding job rewards and found a canonical correlation of .84. This result supported the proposition that the higher the correspondence between the vocational needs of the individual and the rewards of the job, the higher the level of job satisfaction tends to be. In addition to this, research by Rounds, Dawis and Lofquist (1987) showed generally moderate to high correlations, all of which were in the direction predicted by Proposition III, with 19 of the 24 correlations significantly different from zero, and explained 3 to 30% variance in job satisfaction. Other research has shown that satisfaction is an important part of an individual's working experience and that the fit between personal values and organisational supplies (needs-supplies fit) has an impact on satisfaction. Posner's (2010) work in this area has highlighted that where there are differences between personal and work values, dissatisfaction levels are increased as are turnover and stress levels. Perrewe & Hochwarter's (2001) research found that individuals may feel less satisfaction not only with work, but in other areas of their life when personal and work values do not fit, and Srivastava (2011) found that work values had a stronger association in predicting satisfaction than personal values. It has also been suggested that individual work values change and become closer to organisational work values as a person ages (Cogin, 2012). The importance of value congruence, in relation to satisfaction, should not be ignored.

Proposition VII states that the probability that an individual will voluntarily leave the work environment is inversely related to the individual's satisfaction. Research by Taylor and Weiss (1972) attempted to predict job termination from satisfaction, age, number of dependents, education level and sex. They found that only job satisfaction correctly identified job leavers. In addition to this, Hesketh and colleagues (1992) found that intention to stay correlated significantly, but not strongly ($r = .35$) with satisfaction. Taking these two studies together provides some support for this proposition. Bretz and Judge (1994) also undertook research in this area. Their main presumption was that those who fit, and were therefore satisfied, would succeed and contribute to the success of the organisation, while those who did not fit were less likely to be effective performers. Their results supported

these presumptions as they found that person-organisation fit positively predicted tenure and satisfaction. They also pointed out from their research that not fitting may have serious consequences and that organisations should consider the potential benefits from selecting based on fit. The reason for this, they found, is that "fit appears to lead to higher levels of job satisfaction, selecting individuals who fit would presumably result in a more satisfied work force" (p. 49). As the TWA posits: a more satisfied work-force will have lower turnover intentions and therefore longer tenure.

Proposition VIII states that tenure is a joint function of satisfactoriness and satisfaction. A longitudinal study by Anderson (1969) found that individuals who were satisfactory and satisfied at time one were significantly more likely to have remained in the job at time two. Hesketh and colleagues found that both performance (satisfactoriness) and satisfaction were related to intention to stay. Both of these studies provide support for this proposition.

Age, Gender, Tenure and Person-Organisation Correspondence

Many studies have also looked at whether there are differences in age, gender and tenure in relation to satisfaction and values. The results have been contradictory with some research finding differences and other finding no difference. For example Coban (2010) in his research with Turkish football referees found that satisfaction steadily increased with age. He also found that satisfaction peaked in the 8 – 11-year term of refereeing. He found no statistically significant differences for gender, however this may have been because of the low number of women in the study (only 1.2% were women). Edwards and Billsberry (2010) in their research with longer-serving employees, also found no differences in gender.

In another Turkish study (Akpinar, Bayansalduz, & Toros, 2012), this time with teachers, no statistically significant differences were found between satisfaction and age, gender or length of service. This study had a larger percentage of women (39.8%). There were differences in satisfaction levels between the types of school (regular vs private) and the authors conclude that this may have been because of better resources and more motivated students at private schools. They also found differences in position and duties: principals had higher satisfaction levels than ordinary teachers and they conclude that this may have been due to higher pay and status in the community. Traut, Larsen and Feimer (2000) studied a group of firefighters and found that the most satisfied participants were those with the fewest years of service. These

findings are contradictory to those of Coban (2010) and as the authors point out contradictory to the assumption that long-term workers are satisfied with their jobs.

Summary

Overall, the research tends to support the propositions and concepts of the TWA. It has shown to be a relevant theory for a wide variety of ethnicities and cultures as well as ages and gender. Some constructs have been difficult to operationalise, although these authors still appear to be generally supportive of the theory. Hesketh (1985) referred to the TWA as falling within "the best of the trait and factor tradition and has a longstanding empirical basis." (p. 27). Additionally, Lubinski and Benbow (2000) praised the TWA because of its emphasis on assessing the person and assessing the environment. This was also supported by Hardin and Donaldson (2014) who pointed out that failing to consider both the environment and the person "may result in failing to account for critical predictors of outcomes such as satisfaction" (p. 638). However, Tinsley (1993) stated that the TWA place "too restrictive, artificial limits on the ways in which we view ourselves in relation to the external world" (p. 72). Despite Tinsley praising the TWA for its level of precision and attempts to account for many personal and environmental factors, she stresses that the theory needs to do more. She recommends that it is important to incorporate contextual factors that potentially moderate satisfaction, satisfactoriness, and correspondence relations. These items include: Human volition, cognitive processes, and enabling factors such as gender, family situation, and ethnicity. Overall, when referring to the TWA, Eggerth (2008) who, quoted Kurt Lewin, stated "There is nothing so practical as a good theory. By Lewin's criteria, TWA is certainly a good theory" (p. 73).

The current research

The current research is using the TWA concepts as the basis for enquiry. This research will be studying Volunteer Firefighters in New Zealand and will be testing the following hypotheses:

1. A higher match of personal and organisational values will result in a higher level of satisfaction.
2. A higher level of satisfaction will relate to a lower level of intention to leave.

Chapter 6 Methods

Procedure

Data were collected by means of an online survey which was emailed to all volunteer brigades in New Zealand by the New Zealand Fire Service (NZFS) and was also emailed to the membership list of the United Fire Brigades Association (UFBA). Both the NZFS and the UFBA posted information on their websites along with a link to the survey.

The information sheet briefly outlined the purpose of the study, the approximate time it would take to complete and that the survey was completely voluntary and confidential. Participants were also given contact details in the event that they required more information.

The research was submitted to the Massey University Human Ethics Committee (MUHEC) and received approval under number: MUHEC 15/45.

Participants

The survey was open to all volunteer members of the NZFS, whether they were operational firefighters, operational support or brigade support members. Two hundred and fifty volunteers responded to the survey. Preliminary analysis identified 41 responses with little or no data and a further 31 with more than 50% missing data. These cases were removed, leaving 178 (71%) usable responses.

As shown in Table 1, the majority of respondents (87%) were male, nearly half ($n = 85$, 48%) were aged 41-55 and respondents were spread relatively evenly over the five New Zealand Fire Service Regions (Figure 5). Tenure ranged from 6 months to 49 years ($M: 15.5$, $SD: 12.18$) with 50% of respondents having served 12 years or less, 20% having served over 25 years and 10% having served 35 years or more.

Table 1. Participant demographics

	Frequency	Percent
<i>Gender</i>		
Male	154	86.5
Female	24	13.5
Total	178	100.0
<i>Age</i>		
Less than 20	2	1.1
20 – 25	6	3.4
26 – 30	13	7.3
31 – 35	19	10.7
36 – 40	16	9.0
41 – 45	32	18.0
46 – 50	23	12.9
51 – 55	30	16.9
56 – 60	15	8.4
Over 60	22	12.4
Total	178	100.0
<i>Fire Service Region</i>		
Region 1	33	18.5
Region 2	35	19.7
Region 3	46	25.8
Region 4	35	19.7
Region 5	26	14.6
Total	175	98.3
Missing	3	1.7
Total	178	100.0
<i>Role in Brigade</i>		
Firefighter	162	91.0
Operational Support	10	5.6
Non-Operational/Brigade Support	6	3.4
Total	178	100.0

Measures

Work Values

The work values scale was based upon a combination of work by Elizur (1984) and Lyons (2003).

Elizur (1984) Work Values Questionnaire.

The 21-item Work Values Questionnaire (WVQ) by Elizur (1984) has been tested thoroughly cross-culturally (Borg, 1990; Elizur et al., 1991) and across a number of studies (Elizur, 1984, 1991; Selmer, 2000; Tziner & Elizur, 1987) and has shown to be internally consistent (e.g., $\alpha = .88$; Selmer & de Leon, 2002).

Elizur (1984) based the WVQ on a facet definition of work values. Facet analysis provides guidelines for selection of items and allows for the formulation of hypothesised relationships between values components. Using a statistical technique called Smallest Space Analysis (SSA) Elizur described the scale items as (1) 'Instrumental' (pay, hours of work, security, benefits and work conditions); (2) 'Affective' (relations with supervisor, co-workers, recognition, feeling esteem and opportunity to interact with people); and (3) 'Cognitive' values. As suggested by Ros and colleagues (1999) the cognitive category was divided into: 'Cognitive-Intrinsic' items (responsibility, interesting work, feedback, meaningful work, use of abilities, opportunity for development and making a contribution to society); and 'Cognitive-Prestige' items (advancement, achievement, influence in work and the organisation, independence, having pride in company, status).

Lyons (2003) Work Values Survey.

Lyons developed a 31-item scale from 12 well validated work values measures, including Elizur's (1984) WVQ. In factor analysis with 1196 Canadian workers the resulting factors were: (1) Extrinsic (e.g., salary); (2) Intrinsic (e.g., interesting work); (3) Status (e.g., achievement); (4) Social (e.g., co-workers); (5) Altruism (e.g., contributing to society); (6) Freedom (e.g., work-life balance). As many of the questions overlapped with Elizur's scale only those from the freedom and social related factors were included in the present research. It was thought that these factors were more relevant to the current day work environment.

The final scale.

As this research was carried out with volunteers, it was deemed appropriate to remove items that were specific to work. The items from Elizur's WVQ that were removed are: Job security (permanent job); Benefits and social conditions (vacation, sick leave, pension); Pay;

Convenient hours of work; Work conditions (comfortable and clean, absence of noise, dirt and dust); Influence in work. To make the survey more relevant to the present day the following items were added from Lyons' WVS: Feedback; Intellectually stimulating work; The ability to learn and develop; Being able to be creative; The ability to interact with others; Policies are administered fairly; An environment that is fun; An institution that is in line with your moral values and A position that provides change and variety. All items were measured on a six point Likert scale ranging from '1 = Not at All to 6 = To a great extent'.

The changes to Elizur's WVQ and the addition of items from Lyons WVS resulted in a 24-item scale which is shown in Appendix B. (Sections 2 and 3, items 5 – 52). The internal consistency of this measure in the present study has an alpha coefficient of .96. Items that are underlined are how the values are referred to in the remainder of this thesis.

Person-Organisation Values Fit

Assessment of Person-Organisation values fit involved asking participants to answer parallel questions concerning the 24 values. Respondents were asked to rate: (1) "To what extent is each value a priority for you?" (which assessed the individual values of each respondent); and (2) "How well are these values met by being a volunteer firefighter?" (which assessed the extent to which each respondent felt that the value was met by their role in the organisation).

Discrepancy scores were calculated to provide a measure of P-O values fit, where perceived organisational values were subtracted from individual values. These scores were used as they provide the clearest indication of differences between the individuals' values and those they perceived were met by the organisation. This method of identifying the degree of alignment between individual and organisational values has been successfully used in the past (Bretz & Judge, 1994; Finegan, 2000; Meyer, Hecht, Gill, & Toplonysky, 2010; Taris & Feij, 2001; Verquer et al., 2003)

Satisfaction

As the research is targeting an already busy sample, it was important to keep the questionnaire as short as possible. With this in mind, it was decided that overall satisfaction could be adequately measured using one single question: 'Overall, taking everything into

consideration, how satisfied are you with being a volunteer firefighter?' Responses ranged from '1 = Not at all to 6 = To a great extent'. (See Appendix B Section 4, item 53)

Future as a Firefighter

Intentions to leave were assessed using three items (O'Driscoll & Beehr, 1994). The three items were: (1) "Thoughts about quitting cross my mind" with responses ranging from '1 = never' to '6 = All the time'; (2) "I plan to look for a new volunteer role or activity within the next 12 months."; with responses ranging from '1 = strongly disagree to 6 = strongly agree'; (3) "How likely is it, that over the next year, you will actively look for a new volunteer role or activity outside of this organisation?" with responses ranging from '1 = Very unlikely to 6 = Very likely'. (See Appendix B, Section 5, items 54 – 56).

The internal consistency of this measure has been demonstrated by an alpha coefficient of .93 obtained from samples in New Zealand and the USA (O'Driscoll & Beehr, 1994), in this study the measure had an internal consistency of .74.

Data Analysis

Individual and organisational values were compared for fit using mean values. The individual values and organisational values were averaged first then the organisational value mean was deducted from the individual value mean to produce a mean difference score for each of the 24 values. These mean difference scores were then ordered from largest to smallest to see the differences in fit.

Exploratory Factor Analysis (EFA) was used to reduce the number of values and mean value difference scores i.e. individual values, organisational values and mean difference scores were all factor analysed, into a smaller number of factors. EFA is a statistical procedure which groups similar items together, for example, fair supervisor and fair policies are included in the 'work environment' factor. This reduction of 24 values into a reduced number of factors reduces the occurrence of Type 1 error (rejecting the null hypothesis when it is true) and it also makes further analysis less unwieldy and easier to understand.

An additional reason for using EFA in this study was to enable the comparison of this research to previous research findings and resulting factor scales by Elizur (1984) and Lyons (2003) whose work the questionnaire in the current research was based on. Their research found 6-factor scales for individual and organisational values which they labelled intrinsic, extrinsic, status, altruism, freedom and social.

EFA was also carried out on the mean difference scores to ascertain whether they would fall into the same factors as the individual and organisational mean scores. Bivariate correlations were then carried out with the mean difference EFA factors to investigate the possibility of any correlations between age and years of service with satisfaction, intentions to leave and value factors.

Chapter 7 Results

Individual and Organisational Values

Mean scores for each individual and organisational value are shown in Table 2. The individual values showing the least amount of importance to respondents were: *having status, opportunity for advancement, getting recognition, having influence, amount of responsibility and creative activities*. The top values, showing the highest amount of importance to respondents were: *contribution to society, pride in organisation, moral values, sense of achievement, develop new knowledge, and using your ability*.

The lowest-rated organisational values seen as being least met by the organisation were: *having status, having influence, getting recognition, opportunity for advancement, creative activities, and having independence*. The top values, which show that these values were met the most by the organisation: *contribution to society, pride in organisation, sense of achievement, moral values, fulfilling activities and develop new knowledge*.

A comparison of individual and organisational mean differences is shown in Figure 7.

Table 2. Mean Individual-Organisational Value Differences

Individual Value	Mean	Organisational Value	Mean
Contribution to society	5.42	Contribution to society	5.16
Pride in organisation	5.31	Pride in organisation	5.07
Moral values	5.12	Sense of achievement	4.77
Sense of achievement	5.02	Moral values	4.65
Develop new knowledge	5.02	Fulfilling activities	4.56
Using your ability	5.00	Develop new knowledge	4.55
Fair supervisor	4.97	Using your ability	4.51
Lively environment	4.80	Social	4.48
Fulfilling activities	4.76	Interesting activities	4.40
Good workmates	4.74	Fair supervisor	4.40
Interesting activities	4.70	Good workmates	4.36
Fair policies	4.69	Esteem	4.33
Intellectually stimulating	4.67	Intellectually stimulating	4.29
Esteem	4.62	Varied activities	4.25
Social	4.61	Fair policies	4.25
Varied activities	4.60	Lively environment	4.25
Having independence	4.26	Provided with feedback	3.92
Provided with feedback	4.14	Amount of responsibility	3.92
Creative activities	4.11	Having independence	3.91
Amount of responsibility	4.03	Creative activities	3.80
Having influence	3.94	Opportunity for advancement	3.76
Getting recognition	3.83	Getting recognition	3.70
Opportunity for advancement	3.63	Having influence	3.57
Having status	3.10	Having status	3.17

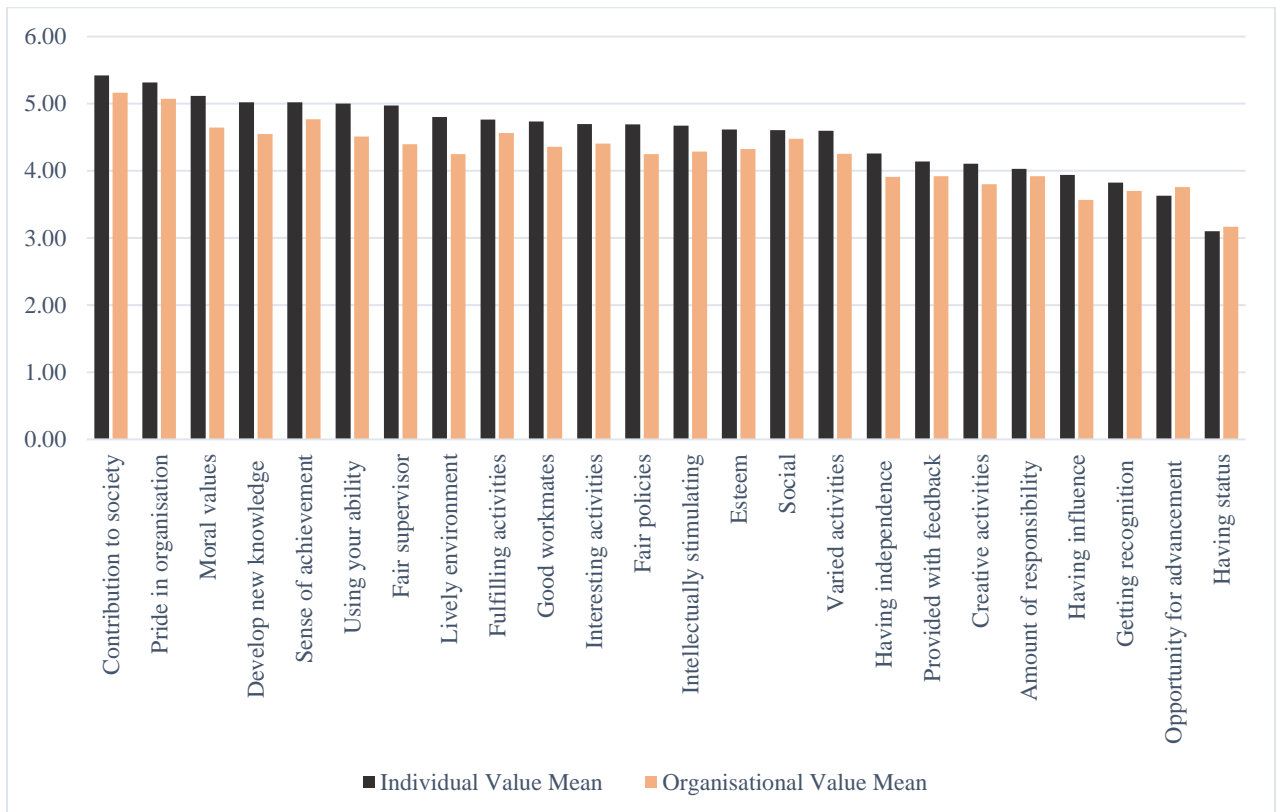


Figure 7. Comparison of Individual and Organisational Value Means

Mean differences between individual and organisational values show very little difference which suggests a reasonably good level of P-O fit (Table 3). Positive responses indicate that the Individual value is regarded more highly than the organisational value, negative responses indicate the opposite. The majority of difference scores were positive, indicating that the individual values were higher than what the organisation provided except for *opportunity for advancement* and *having status*. These two values were scored as being met by the organisation but not valued as highly by the individual, hence the negative score. A comparison of these scores is shown in Figure 8.

The closest fit between individual and organisational values were for: *opportunity for advancement, having status, amount of responsibility, getting recognition, social, and fulfilling activities*, indicating that these values had good P-O fit. The values with the worst P-O fit were: *develop new knowledge, moral values, using your ability, lively environment and fair supervisor*.

Table 3. Mean differences of values

Value	Difference
Fair supervisor	0.57
Lively environment	0.56
Using your ability	0.49
Moral values	0.47
Develop new knowledge	0.47
Fair policies	0.44
Intellectually stimulating	0.39
Good workmates	0.38
Having influence	0.37
Having independence	0.35
Varied activities	0.34
Creative activities	0.30
Interesting activities	0.29
Esteem	0.29
Contribution to society	0.26
Sense of achievement	0.25
Pride in organisation	0.24
Provided with feedback	0.22
Fulfilling activities	0.20
Social	0.13
Getting recognition	0.12
Amount of responsibility	0.11
Having status	-0.07
Opportunity for advancement	-0.13

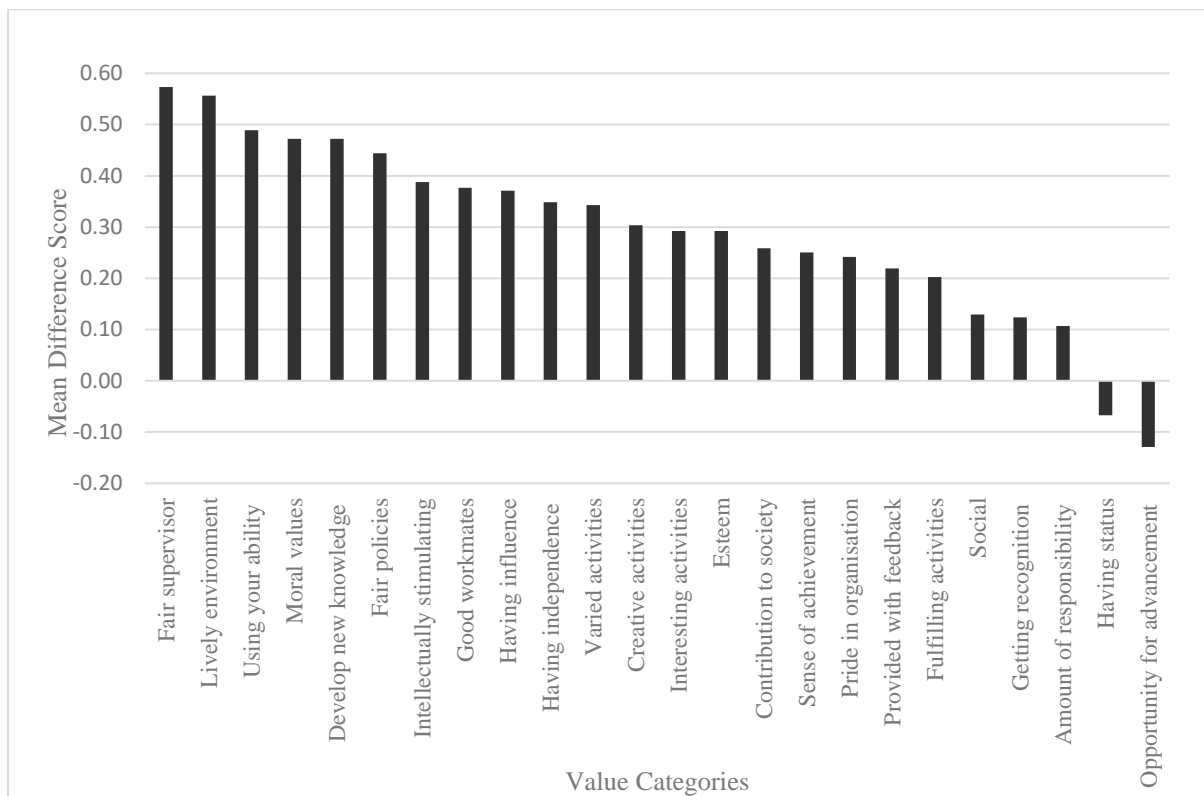


Figure 8. Difference between Individual and Organisational Mean values

Exploratory Factor Analysis

Exploratory Factor Analysis was carried out on the 24 individual values items and the 24 organisational value items in an effort to compare them to Elizur's 6-factor structure. The factor analysis that resulted in the best fit was a 3-factor scale for individual values and a different 3-factor scale for organisational values. The rotated component matrices for each factor analysis are included in Appendix C and D.

Individual factors

For the individual values, Principal Component Analysis (PCA) with Varimax rotation identified a three-factor structure which explained 54.13% of the variance. The three factors were *pride* ($\alpha = .88$), *self-development* ($\alpha = .89$), and *workmates* ($\alpha = .68$)

The items that made up each factor are: *Pride*: sense of achievement; opportunity for advancement; pride in organisation; esteem; being provided with feedback; having independence; having influence; having status; social; getting recognition; and amount of

responsibility. *Self-development*: interesting activities; fulfilling activities; develop new knowledge; using your ability; intellectually stimulating; creative activities; lively environment; moral values; and varied activities. *Workmates*: good workmates; fair supervisor; and fair policies.

Organisational Factors

For the organisational values PCA with Varimax rotation identified a three-factor structure which explained 65.14% of the variance. The three factors were labelled *work environment* ($\alpha = .95$), *Recognition* ($\alpha = .91$), and *pride* ($\alpha = .75$).

The items that made up each factor are: *Work environment*: interesting activities; fulfilling activities; develop new knowledge; fair supervisor; using your ability; intellectually stimulating; creative activities; fair policies; lively environment; moral values; and varied activities. *Recognition*: opportunity for advancement; good workmates; esteem; provided with feedback; having independence; having influence; having status; social; getting recognition; and amount of responsibility. *Pride*: sense of achievement; pride in organisation; and contribution to society.

The expected six-factor structure did not emerge for either individual or organisational values; and the factor structures for each set were not the same. This meant that no direct comparisons between groups or sets of work values, collated into reliable scales, were possible.

Bivariate correlations

Correlations were carried out with the six factors i.e., the three individual and the three organisational factors, to see if there were any correlation with age, years of service, satisfaction and intention to leave.

Higher levels of job satisfaction were related to higher levels of the individual values of pride and self-development, and the organisational values of work environment, recognition and pride. Job satisfaction was negatively related to intentions to quit, work environment, recognition and pride (Table 4).

There were no significant gender differences for individual work values ($t(177) = -46.98, p > .05$), organisational work values ($t(177) = -37.73, p > .05$), job satisfaction ($t(177) = -42.52, p > .05$) and intentions to leave ($t(177) = -13.28, p > .05$). There were also no differences related to age, role and region (Age $F(5,171) = 0.98, p > .05$, Region $F(5, 168) = .640, p > .05$, and Role $F(5, 171) = 1.59, p > .05$).

Age, gender, region, years of service and role were not significantly related to job satisfaction or intentions to leave. Hypothesis three was not supported as years of service were not related to either job satisfaction or intentions to leave.

Table 4. Bivariate Correlations

	1	2	3	4	5	6	7	8	9	10
1 Age										
2. Years of Service	.542**									
3. Satisfaction	.031	.029								
4. Intentions to leave	.031	.071	-.402**							
5. Pride (IWV)	-.053	-.010	.198**	-.035						
6. Self-development (IWV)	-.126	-.141	.184*	-.061	.622**					
7. Workmates (IWV)	-.068	-.092	.090	-.060	.596**	.577**				
8. Work Environment (OWV)	-.106	-.098	.374**	-.142	.445**	.637**	.385**			
9. Recognition (OWV)	.032	.059	.394**	-.167*	.600**	.479**	.372**	.750**		
10. Pride (OWV)	.014	.006	.403**	-.242**	.558**	.423**	.352**	.584**	.726**	
Mean	6.5	15.6	4.80	2.39	4.24	4.76	4.80	4.46	3.95	4.58
SD	2.30	12.18	1.05	1.21	.83	.73	.82	.94	.98	.85

** p < 0.01. * p < .05.

IWV = Individual Work Values. OWV = Organisational Work Values.

Exploratory Factor Analysis – Individual and Organisational Mean Differences

Exploratory Factor Analysis (EFA) was carried out on the differences between the individual value means and the organisational value means to see which factors would emerge from the data. The results found five factors that accounted for 61.36% of the variance. The factors identified were: *work environment* (8 items: e.g., fair supervisor, using your ability, $\alpha = .91$); *self-esteem* (4 items, e.g., good workmates, esteem, $\alpha = .79$); *self-development* (5 items, e.g. sense of achievement, interesting activities, $\alpha = .77$); *power* (4 items, e.g., amount of influence, having status $\alpha = .73$); and *pride* (3 items, e.g., opportunity for advancement, pride in organisation $\alpha = .56$). The full rotated component matrix showing each factor is included in Appendix E.

Using the five factors above, a correlation was run to see if there was any relationship between these factors and age, years of service, satisfaction and intentions to leave (Table 5). Higher levels of job satisfaction were related to lower levels of all five factors, meaning that as satisfaction increases the difference between individual values and organisational values decreases (better P-O fit). Therefore Hypothesis 1 is supported.

Intentions to leave were only correlated with the factors of *self-development*, *power* and *pride*; the larger the difference in these factors (worse P-O fit) the more likely one is to leave. Therefore Hypothesis 2 is only partially supported as intention to leave was correlated with only some of the factors.

Table 5. Correlations of Mean Difference Factors

	1	2	3	4	5	6	7	8	9
1. Age									
2. Years of Service	.542 ^{**}								
3. Satisfaction	.031	.029							
4. Intentions to leave	.031	.071	-.402 ^{**}						
5. Work environment	.017	.023	-.237 ^{**}	.094					
6. Self-esteem	-.097	-.029	-.250 ^{**}	.115	.402 ^{**}				
7. Self-development	-.099	-.109	-.226 ^{**}	.192 [*]	.342 ^{**}	.425 ^{**}			
8. Power	.003	.005	-.223 ^{**}	.173 [*]	.358 ^{**}	.476 ^{**}	.450 ^{**}		
9. Pride	-.136	-.160 [*]	-.168 [*]	.243 ^{**}	.219 ^{**}	.292 ^{**}	.347 ^{**}	.332 ^{**}	
Mean	6.50	15.59	4.78	2.37	.49	.31	.27	.13	.12
SD	2.30	12.18	1.11	1.22	1.04	1.03	.81	.93	.81

** p < .01. * p < .05.

Chapter 8 Discussion

This section presents a discussion of the findings of this research and the importance of these to understanding work values, satisfaction and intentions to leave with New Zealand volunteer firefighters. This section is organised in the following way: first, the results of the present study are discussed. Second, limitations of this research and possible suggestions for further research are discussed. Finally, the practical implications of these findings are presented along with concluding comments.

Work Values.

There were no differences between any of the 24 work values on gender, age, years of service, region or role. Cugin (2012) found that values changed as people got older and Smola & Sutton's (2002) research indicated that over time peoples values would change to suit their workplace or organisation more closely, this was not the case in this research. It is a possibility that, in the work environment, people change their values to suit their job, but in the case of volunteering if their values do not match they leave that volunteer organisation, after all, there are many more volunteer positions available than permanent paid jobs. It is possible that individuals who join the NZFS have similar values which are well suited to the role of firefighting and therefore do not change over time. Research by McLennan and Birch (2008) in Australia and UMR Research (2001) in New Zealand both found that new firefighters are often recruited by their friends who are existing firefighters, so there is a distinct possibility that people who are friends would have similar values, hence be well suited to firefighting.

The values that were the most important were contribution to society, pride in organisation, moral values and sense of achievement. These four values were rated the highest in both individual and organisational values. It is not surprising that the value of contribution to society is not only valued by the individuals but also the highest value met by the organisation. This gets to the core of what volunteer firefighting is really about; making a difference in your community. If contributing to society was not a value that was regarded highly it would be unusual that an individual would volunteer in a community service organisation. It is also not surprising that the values of pride in organisation, moral values and sense of achievement were rated highest in both individual and organisational values.

Having pride in the organisation, your role as a firefighter and having a sense of achievement are not necessarily attributes that are outwardly shown, rather they are the quiet pride that one has inside; a sense of knowing that you are doing good things, without having to say so.

Having a volunteer position that aligns with your own moral values also makes sense. It is a good possibility that volunteers are attracted to organisations which seem to share their moral values, which is why we have different people volunteering in different organisations.

The values with the lowest mean scores were the same for individual and organisational values. Values with the lowest scores were having influence, getting recognition, opportunity for advancement and having status. As volunteer firefighting is a group oriented activity, having influence and having status are probably not well met in a group atmosphere. Individuals who regard these values highly may not be satisfied with firefighting and may leave early on in their volunteer career as firefighting does not fulfil their needs. Getting recognition and opportunity for advancement are not shown to be motivators for volunteering (McLennan & Birch, 2008). In reality, sometimes an advancement in the brigade means less time fighting fires and more time behind a desk doing paperwork, which is not shown to be a motivator in previous research (UMR Research, 2001).

These high and low values give an excellent picture of the typical firefighter who wants to serve their community and be proud of the organisation they serve, but does not want a big deal made of it. They are quite happy to do the work and leave the recognition to the 'higher up's'. They don't need a pat on the back or a certificate on the wall, they just want to do what's right and to do it well.

Factor Analysis

Based on earlier work (Elizur, 1984) it was theorised that a 6-factor structure would emerge. A six-factor solution was attempted however this was discarded as many of the items, both on the individual and organisational value scales, cross loaded on more than one factor and the factors were difficult to interpret. Elizur's work has been replicated in many studies (e.g., Lyons et al., 2010; Tillquist, 1996; Tziner, 1983) but only in non-volunteer settings. It may be that in a volunteer setting these factors are quite different from a work setting. The difference in number of factors may have resulted from this group of participants being

volunteers rather than employees, in that the 'altruism' factor of Elizur is already what they are doing, not simply a part of it.

Volunteering is different to paid employment in that some of the reinforcers and motivators that are in paid employment are absent in volunteering. In paid employment there are wages, good working conditions, annual leave and staff benefits that help to increase an individual's satisfaction over and above their work values. In a volunteer situation, these conditions are absent, so different reinforcers such as community service or sense of achievement must serve as satisfiers. This difference in benefits and motivations may contribute to why the factors were different between employed groups of participants and these volunteer participants.

Individual factors.

The three factors that emerged for individual values were pride, self-development and workmates. The individual factors of pride and self-development were related to higher levels of satisfaction and lower levels of intentions to leave.

The Self-development factor showed the importance of interesting and varied activities, developing new knowledge and skills, and the ability to use existing knowledge and skills for volunteer firefighters. The range of skills and knowledge that volunteer firefighters have is widely varied and the opportunity for almost anyone to utilise their skills in this area is of importance in recruiting new firefighters. This factor shows that volunteer firefighters are people who value learning and stimulating environments and want to increase their skills and knowledge.

The factor of Pride showed that volunteers are not only proud of what they do as individuals but are proud to be part of the wider organisation of firefighters. Higher levels of pride were associated with higher levels of satisfaction.

The factor of Workmates showed that a fair 'workplace' is important to volunteer firefighters. Keeping in mind that they are volunteers, discipline and rules have to be managed carefully to avoid being overbearing or unfair but still being consistent to everyone. There is a real possibility that volunteers will leave if they see rules and regulations to be too restrictive or

unfair. The ability for volunteers, especially firefighters, to get along together is essential as firefighters are required to work together as a team at incidents. The ability to get along and even make friends with fellow firefighter also has potential mental health benefits after a serious incident (Corneil et al., 1999). The closer the firefighters are personally, the easier it should be for them to talk through distressing events, therefore reducing ongoing mental health issues such as post-traumatic stress disorder (Beaton, Murphy, Pike, & Corneil, 1997).

Organisational Factors

The three organisational factors were all related to higher levels of satisfaction, but not to intentions to leave. This leads this author to believe that if individual values are being met, the firefighter is satisfied. It may be the role that keeps them in the brigade rather than the organisation itself.

The work environment factor shows the importance of the environment being stimulating, fair, varied and interesting. Similar to the individual factors of self-development and workmates, this factor includes values that would be easily met by firefighting. Interesting activities, fulfilling activities, developing new knowledge, using your ability, intellectual stimulation and a lively environment are just some of the values in this factor and also some of the elements experienced in any fire brigade incident.

The recognition factor shows that the firefighters are being recognised for their work in several ways. The opportunity to advance, being provided with feedback, having responsibility and getting recognition are some of the values that the organisation is providing to the volunteers. It should be noted that this is not the individuals' need for recognition, but the organisations supply of recognition of the work done.

The pride factor here shows that contribution to society and sense of achievement associated with it are a less important part of the job than the other two factors.

P-O Fit.

This research also looked at the level of P-O fit between the firefighters' individual values and those provided by the organisation. Much of the literature on P-O fit indicates that a higher level of P-O fit will result in longer tenure (Dawis & Lofquist, 1984; Edwards, 1991; Taris & Feij, 2001) which is an asset to any fire brigade. P-O Fit in this instance was measured by the difference between the firefighters' individual value scores and the organisational value scores. Although the data did not show a statistically significant correlation with age or length of service and P-O fit it is interesting to note that the average length of service was 15.5 years and average age group was 41-45 years old. It is a possibility that as firefighters get older, and have longer service, their values become more like that of the organisation or those whose values do not fit have already left. It could also be that the people who responded to this research are better suited to the position of volunteer firefighter and wished to share that information than those who did not respond; an area for future research.

Although the values of contribution to society, pride in organisation, moral values and sense of achievement were rated highest in both individual and organisational values they did not have the best fit. The mean differences were not large, but they were outside the top six for fit. This can be interpreted as indicating that although they are important to the individual they are not being met as well as they could be by the organisation.

The two other values with excellent fit, fulfilling activities and social, were ranked around average in importance in both individual and organisation values. These two activities are not rated highly by participants and not supplied by the organisation. This is an interesting point in that this author would have thought the activities would have been fulfilling and would have expected that the organisational supplies would have 'over-fitted' the individual needs. With the social value it is very hard to tell whether this would be a typical result as some brigades are very social and others not social at all. With larger numbers of participants, this value may well have been quite different.

Three of the four values which had the lowest individual and organisational importance also had the best fit (getting recognition, having status and opportunity for advancement). This

could be because they are neither seen as important by the individual nor met by the organisation. Having good P-O fit does not necessarily mean that the values are important.

Satisfaction and Intentions to leave.

The literature indicates that satisfaction and intentions to leave are also good indicators of P-O fit and longer tenure (Bretz & Judge, 1994). Satisfaction and intentions to leave were investigated in this research and it was hypothesised that satisfaction would be higher and intentions to leave lower when an individual had better P-O fit. This was only partially supported. Higher satisfaction levels were associated with lower levels of all five mean difference factors meaning that better P-O fit results in higher satisfaction levels. Intentions to leave were correlated with only three of the five factors (self-development, power and pride). There are other factors that likely influence the intention to leave a brigade, for example; work and family commitments (UMR Research, 2001).

The implications of these findings are two-fold. Firstly, having brigade members with similar values to the organisation will increase their satisfaction with the role of firefighter. Secondly, ensuring that brigade members have the opportunity for self-development and have power over their future in the brigade are important parts of retaining these members.

Limitations of this Research

This research had a low number of respondents ($n = 178$) which makes it difficult to generalise any findings across the broader volunteer firefighting population of New Zealand. In future, research with volunteer firefighters may be better carried out at brigade training nights, perhaps via Skype or by the brigade training officer, to reduce the intrusion into free time and boost response rates.

The questionnaire was a self-report style which has the issue of social desirability bias. This is where respondents over-report items they deem socially respected and under-report those that they see would be socially undesirable (Crowne & Marlowe, 1964). With this in mind, efforts were made to overcome this issue. Firstly, respondents were assured of their anonymity which according to Joinson (1999) reduces this bias. Along with this the data collection was done via an online survey which, according to research by Matheson and

Zanna (1988), has been found to produce more honest responses. This is because of an increased sense of privacy in comparison with paper-based versions. Additionally, there was no motivation to respond to questions in an un-true manner. The data were not being collected for promotion or selection purposes and the reasons for collecting the data were made clear to the respondents in the information sheet at the outset of the survey.

Finally, the questionnaire used for this research was based upon a work values questionnaire rather than one previously used with volunteers. This may have biased the questions toward values associated with paid employment rather than a volunteer environment. Although the questions appeared to have sufficient face validity it is a possibility that 'work' values do not completely represent the values of most importance to a non-work group.

Future Research

Future research could include 'brigade-centric' research; to pinpoint the values common to each brigade. This information may be more valuable to brigade CFOs to ensure the P-O fit of existing members, and ensuring their satisfaction and longer tenure, as well as for targeting the potential P-O fit of new recruits.

This research could be extended to larger samples of volunteer firefighters in New Zealand to get a broader view of work values and their link to satisfaction and intentions to leave. It could also be extended to other volunteer organisations to see if work values measures are appropriate for non-work settings and to investigate satisfaction and intention to leave in non-work settings.

Conclusion

As volunteers become more difficult to find and keep, volunteer organisation must continue to ensure their volunteers are satisfied. By having a better understanding of the P-O fit of their volunteers the New Zealand Fire Service and individual brigades can find new and innovative ways of improving P-O fit and therefore increasing satisfaction and tenure. Awareness of important values to volunteer firefighters can enable brigade CFOs to recruit new members with the potential to have high P-O fit thus reducing early resignations by recruits.

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Appendices

Appendix A

Work Values and New Zealand Volunteer Firefighters

INFORMATION SHEET

My name is Caroline Stark and I am conducting this research for my Master of Arts (Psychology) Degree with Massey University in Palmerston North. I am a Life Member of the Kaponga Volunteer Brigade where I served for 15 years before moving to Hawera in 2007. This research is being supervised by Dr Dianne Gardner of Massey University in Palmerston North.

This research is supported by the New Zealand Fire Service and will investigate what values are important to you personally and to what extent they are met by your role as a volunteer firefighter. Other research has shown that when a person's values are well met by the organisation they are involved with (person-organisation values fit), their levels of satisfaction are higher and therefore, they will stay longer with that organisation. It is my hope that by carrying out this research I can get a better idea of what values are important to volunteer firefighters and whether these are met by the volunteer firefighter experience. This information will then be distributed to brigades to help them when recruiting new members, to try to recruit members whose values meet that of the organisation, therefore, stay longer in the brigade.

I would like to invite all volunteer firefighters to participate in the research. Participation is completely voluntary and all answers are completely anonymous.

The New Zealand Fire Service has emailed a link to your brigade (along with this email) which will take you to an online survey. Please note: if there are several people using the same computer (e.g., at the station), you cannot leave the survey part way through and resume it later, it will have to be finished in one sitting. This is because the survey will remember where that person is up to, and will start again from that point. This may cause two different people's responses being recorded as a single person. You can, if you wish, forward this link to your home email address or alternatively you can use the QR code below for your smart-phone or tablet.

This survey is open to all volunteer firefighters, regardless of rank, age or years of service. It is hoped that I can get as many volunteer firefighters as possible to participate because the more information that I can gather the more accurate the results will be.

The online survey consists of 57 questions and should take around 10-15 minutes to complete. Questions include your age, gender, fire service region, years of service, personal values (for example; making a contribution to society, rated on a scale from 1 to 6), organisational values (these are the same as the personal values and you indicate how well these are met by the organisation, again rated on a 1 to 6 scale), satisfaction with your role as a firefighter, and intention to quit (these items are also on a 1 to 6 scale).

The data you provide, may contain personal information (as defined by the Privacy Act 1993), that information is collected solely for the purposes of the research I am undertaking. The information obtained from you will be completely anonymous and will be stored on a password protected computer. No identifying data (e.g. ip address or email address) will be attached to the results of your survey. The information collected will be collated and may form part of the finalised report of my research. You will not be identified through the reporting process. The results of the research will be made available to your brigade by the Fire Service once this project is completed which will be early 2016, again you will not be identified through this process.

You can choose to respond or not respond to any question and you can withdraw from the study at any time. Your consent will be requested and required at the beginning of the survey before you can proceed.

If you have any questions regarding this research, please do not hesitate to contact me or my supervisor Dr Dianne Gardner.

Many thanks
Caroline Stark

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*This project has been reviewed and approved by the Massey University Human Ethics Committee:
Southern B, Application 15/45.*
If you have any concerns about the conduct of the research, please contact
Prof Julie Boddy, Acting Chair, Massey University Human Ethics Committee: Southern B, telephone
06 3569-099 x 86055, email humanethicsouthb@massey.ac.nz.

Appendix B

Respondent Consent

Thank you for participating in this questionnaire. Your participation implies consent.

You have the right to decline to answer any particular question.

I have read the Information Sheet. My questions have been answered to my satisfaction. I understand that I may ask further questions at any time.

(Please click on the 'Yes' choice if you wish to proceed.)

Section 1 - Demographics

1. What is your age group?
2. What is your gender?
3. Which fire service region is your brigade in?
4. How many years of service have you done? (Include service in all brigades that you have been a member of).

Section 2 - Individual Values

The items below represent values that people consider to be important. We are asking you to consider each of these values and how important they are for you. To what extent is each value a priority for you?

6-Point Scale from: Not At All, A little, To Some Extent, To a Reasonable Extent, To a Considerable Extent, To a Great Extent

1. A sense of achievement
2. Opportunity for advancement; chances for promotion
3. To be involved with an organisation that you are proud of (Pride in organisation)
4. Making a contribution to society
5. Working with other's who are pleasant and agreeable (Good Workmates)
6. Esteem; feeling like you are valued as a person
7. Being provided with feedback about your performance
8. Having independence to make your own decisions
9. Having influence in an organisation
10. Doing interesting activities
11. Having status

12. Doing activities that you find fulfilling (Fulfilling Activities)
13. Having the opportunity to learn and develop new knowledge and skills
14. Being able to meet people and interact with them (Social)
15. Getting recognition for a job well done
16. The amount of responsibility you have
17. A considerate and fair supervisor or manager
18. Using your ability and knowledge
19. Doing activities that are intellectually stimulating
20. Doing activities that involve creativity (Creative Activities)
21. Being in a setting where policies are administered fairly (Fair Policies)
22. An environment which is lively and fun (Lively Environment)
23. Doing activities that are consistent with your moral values
24. Activity that provides change and variety (Varied Activities)

Section 3 - Organisational Values

Thank you for your personal values information. This section is about how well your role as a firefighter meets those personal values. The same statements are used as for the personal values, and this time, think about how well these values are met by being a volunteer firefighter.

6-Point Scale from: Not At All, A little, To Some Extent, To a Reasonable Extent, To a Considerable Extent, To a Great Extent

25. A sense of achievement
26. Opportunity for advancement; chances for promotion
27. To be involved with an organisation that you are proud of (Pride in organisation)
28. Making a contribution to society
29. Working with other's who are pleasant and agreeable (Good Workmates)
30. Esteem; feeling like you are valued as a person
31. Being provided with feedback about your performance
32. Having independence to make your own decisions
33. Having influence in an organisation
34. Doing interesting activities
35. Having status
36. Doing activities that you find fulfilling (Fulfilling Activities)
37. Having the opportunity to learn and develop new knowledge and skills

- 38. Being able to meet people and interact with them (Social)
- 39. Getting recognition for a job well done
- 40. The amount of responsibility you have
- 41. A considerate and fair supervisor or manager
- 42. Using your ability and knowledge
- 43. Doing activities that are intellectually stimulating
- 44. Doing activities that involve creativity (Creative Activities)
- 45. Being in a setting where policies are administered fairly (Fair Policies)
- 46. An environment which is lively and fun (Lively Environment)
- 47. Doing activities that are consistent with your moral values
- 48. Activity that provides change and variety (Varied Activities)

Section 4 - Satisfaction

6-Point Scale from: Not at All, A little, To Some Extent, To a Reasonable Extent, To a Considerable Extent, To a Great Extent

- 49. Overall, taking everything into consideration, how satisfied are you with being a volunteer firefighter?

Section 5 - Your future as a firefighter.

The following statements ask you how you feel about your present volunteer activity or role, compared with alternative volunteer opportunities that you may be interested in. Please choose the answer that best represents the way that you feel.

- 50. Thoughts about quitting cross my mind.

6-point scale: Never, Rarely, Sometimes, Often, Very Often, All the time.

- 51. I plan to look for a new volunteer role or activity within the next 12 months.

6-point scale: Strongly Disagree, Moderately Disagree, Slightly Disagree, Slightly Agree, Moderately Agree, Strongly Agree,

- 52. How likely is it that, over the next year, you will actively look for a new volunteer role or activity outside of this organisation?

6-point scale: Very Unlikely, Somewhat Unlikely, Moderately Unlikely, Moderately Likely, Somewhat Likely, Very Likely

Appendix C

Exploratory Factor Analysis of Individual values (Rotated Component Matrix)

	Component		
	1	2	3
Sense of achievement	.505		
Opportunity for advancement	.723		
Pride	.473		
Contribution to society			
Workmates			.675
Esteem	.637		.460
Provided with feedback	.533		.445
Having independence	.557		
Having influence	.646		
Interesting activities	.443	.671	
Having status	.775		
Fulfilling activities	.495	.552	
Develop new knowledge	.409	.698	
Social	.521		
Getting recognition	.675		
Amount of responsibility	.665		
Fair supervisor			.648
Using your ability		.637	.432
Intellectually stimulating		.756	
Creative activities		.718	
Fair policies			.661
Lively environment		.542	.512
Moral values		.567	.512
Varied activities		.698	

Note: bold-type indicates which factor includes the value

Appendix D

Exploratory Factor Analysis of Organisational values (Rotated Component Matrix)

	Component		
	1	2	3
Sense of achievement			.677
Opportunity for advancement		.764	
Pride			.726
Contribution to society			.826
Good workmates		.545	
Esteem		.550	.504
Provided with feedback	.521	.561	
Having independence		.666	
Having influence		.734	
Interesting activities	.577	.475	.409
Having status		.773	
Fulfilling activities	.568	.401	.453
Develop new knowledge	.567		.447
Social		.498	.439
Getting recognition		.693	
Amount of responsibility		.693	
Fair supervisor	.706		
Using your ability	.720		
Intellectually stimulating	.789		
Creative activities	.679	.425	
Fair policies	.717		
Lively environment	.731		
Moral values	.669		.415
Varied activities	.733		

Note: bold-type indicates which factor includes the value

Appendix E

Exploratory Factor Analysis of differences between individual and organisational mean scores (Rotated Component Matrix)

	Component				
	1	2	3	4	5
Sense of achievement			.622		
Opportunity for advancement					.569
Pride					.672
Contribution to society					.761
Good workmates		.572			
Esteem		.766			
Provided with feedback		.721			
Having independence		.776			
Having influence				.455	
Interesting activities			.521		
Having status				.733	
Fulfilling activities			.524		
Develop new knowledge			.634		
Social			.607		
Getting recognition				.576	
Amount of responsibility				.723	
Fair supervisor	.641				
Using your ability	.749				
Intellectually stimulating	.697				
Creative activities	.696				
Fair policies	.734				
Lively environment	.791				
Moral values	.798				
Varied activities	.741				