



FIRE
EMERGENCY

NEW ZEALAND

READY TO RESPOND: IMPACT OF ILLNESS, INJURY AND DEATH INCIDENTS ON FIREFIGHTER WELLBEING

SHORE & Whāriki Research Centre, Massey University
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In late 2014, Fire and Emergency New Zealand reached an agreement with St John New Zealand and Wellington Free Ambulance to attend all life-threatening, cardiac or respiratory arrest emergencies (also known as 'purple' calls), as co-responders. The number of medical emergencies attended by Fire and Emergency has been increasing significantly and in 2017 there were over 10,600 medical co-response and first response call-outs.

As an organisation, we put the psychological wellbeing and health of our personnel first and foremost, nothing is more important than our people.

This research was undertaken to investigate the impact on the psychological wellbeing of firefighters attending potentially traumatic calls with the intention of informing actions to strengthen support for firefighters.



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Ready to Respond: Understanding the impact of illness, injury and death on firefighter wellbeing

Report to Fire and Emergency New Zealand

SHORE & Whariki Research Centre
College of Health
Massey University
Auckland
New Zealand

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Research summary

Introduction

In late 2014, Fire and Emergency New Zealand reached an agreement with St John New Zealand and Wellington Free Ambulance to attend all life-threatening, cardiac or respiratory arrest emergencies, also known as 'purple' calls, as co-responders. The number of medical emergencies has been increasing significantly and in 2016 there were over 10,000 medical co-response and first response call-outs.

This research was undertaken to investigate the impact on psychological wellbeing of firefighters attending traumatic calls with the intention of informing actions to strengthen support for firefighters.

Method

A qualitative method was used. Forty-four firefighters were interviewed individually by telephone and 10 Māori firefighters took part in a face-to-face focus group. Twelve key informants were also interviewed individually by telephone. All interviews and the focus group were recorded and transcribed. Data were analysed using a general inductive approach.

Key results

Firefighters, environment and culture

Firefighters reported a very strong motivation for them was helping others. Many identified attending medical calls was inevitably a key role for a modern emergency service and this was another way they were able to help others. Some resistance to an increasing medical role was noted and typically the medical role was described as not what some firefighters had 'signed up for'. The introduction of the co-response medical role was viewed as having been poorly communicated both to firefighters and the general public. Difficulties for Māori within Fire and Emergency were identified primarily as discrimination and the lack of cultural awareness and understanding of Te Ao Māori exhibited by non-Māori personnel. Firefighting was identified as a masculine domain with varying levels of acceptance for women firefighters across brigades.

Impacts on firefighters

Firefighters reported non-fire incidents such as medical calls, motor vehicle accidents and suicides largely had negative impacts on them and their families; however some positive impacts were reported. The medical calls attended by co-responder brigades are purples – these are reported to have a high death rate. Being perceived as 'the good guys' who help and support the community affects firefighters attending purple calls where both the community and firefighters may have unrealistic expectations of a good outcome. A number of firefighters reported knowing the likelihood of a poor result contributes to anxiety about their performance and self-doubt (feeling they have not done enough to help or they could have done better, or self-doubt they might have made some mistakes). The impacts on personal and family life were typically regarded as negative. Many firefighters shared their observations of the negative effects the medical role has had on their colleagues.

Preparation of firefighters

Firefighters generally equated preparation for firefighting with the training they had received for their respective roles. There were mixed views among firefighters with regard to training for non-fire and medical roles. Many career and volunteer firefighters (co-responders) reported being well trained for their role, albeit to a specific (limited) scope. First aid training for these firefighters was described as fundamental or at a base level. A contrary view was strongly expressed by other career and volunteer co-responder firefighters indicating they were not well prepared for these roles and with more training they could be more effective. Volunteer firefighters (first responders) typically reported they felt well prepared by the training they had received. New recruits were generally thought of as being well aware of the shift in focus from firefighting to non-fire responsibilities and so were thought of as prepared for the scope of their firefighting roles. For some participants the rapid introduction of the co-response responsibilities contributed to a sense of being unprepared. Many participants identified a number of training and preparation gaps including: working with Māori and a range of ethnicities and cultures; managing psychological wellbeing; reframing success; and improving training quality. Several firefighters raised the idea that all firefighters (across the board) need more medical training. The importance of having well prepared teams was also noted as allowing for the strengths of individuals to be acknowledged and for individuals within that team to be supported in their work.

Support for firefighters

Support for firefighters was discussed in terms of brigade support, which consisted of formal and informal processes and the ways in which firefighters utilised coping strategies outside of their brigade. Fire and Emergency was viewed as being committed to supporting firefighters wellbeing and a positive culture around help-seeking was identified as developing. Formal brigade support was related to debriefing, leadership, peer support and employee assistance programme (EAP) support. The quality of this formal support was discussed with mixed views. Some considered formal debriefing processes helpful while others preferred a more informal approach. Many spoke positively about the quality of leadership within their brigades, however some participants referred to 'old school' culture, practices and attitudes that hindered help-seeking. A few participants commented that changes needed to be made, but this would probably not happen until their leaders retired. Some participants were unsure whether seeking help would be treated as confidential. The peer support system implemented by Fire and Emergency was considered by some participants to be helpful, but overall there were few comments relating to this more formalised peer support process. Participants who had accessed EAP had mixed views about the helpfulness of this counselling support. Most participants reported being aware of formal support services, as they were well promoted in their stations. With regard to informal support within their brigades, firefighters spoke positively about camaraderie. There was a culture of 'looking out for each other' and many spoke of the value of 'black humour' as an immediate coping mechanism during and after call-outs. Personal coping strategies adopted outside of the brigade were mainly described by participants as being able to talk to their families and friends. Other strategies involved physical activity, socialising, in particular with their crew members, keeping busy, spiritual support and blocking out incidents.

Areas for action

These results indicate a number of potential areas for action for Fire and Emergency to consider that will contribute towards: improving the environment and culture for firefighters, limiting the impacts of medical calls on firefighters, improving the preparation of firefighters, and strengthening support for firefighters.

Improving the environment and culture for firefighters

Fire and Emergency could consider initiatives to:

- build further support for the importance of the medical role among 'reluctant' firefighters
- actively communicate the medical and other non-fire roles to the general public
- give greater effect to the commitment to Māori firefighters implied by the prominent positioning of Whakaratonga Iwi on the logo
- continue and/or enhance the recruiting, supporting and retaining of Māori and women firefighters
- ensure inclusiveness training is provided to all firefighters

Limiting the impacts of medical calls on firefighters and their families

Fire and Emergency could consider initiatives to:

- educate families about the potential negative impacts on firefighters and ways they can support firefighters and reduce the effects on family members
- build the skills/resilience of firefighters to counter known stressors (see following section for specifics)

Improving the preparation of firefighters

Fire and Emergency could consider initiatives to:

- build confidence and surety among firefighters they are appropriately trained for their medical responsibilities
- provide opportunities for more advanced medical training for firefighters who are interested
- build a more comprehensive suite of training initiatives to meet firefighter needs (e.g., communication skills, working with Māori, managing/monitoring psychological wellbeing, dealing with stress)
- ensure resilience and psychological training is provided to all firefighters
- communicate what a realistic understanding of what 'success' looks like in medical calls
- provide ongoing scenario training for first aid so crews are more fully prepared for medical calls

Strengthening support for firefighters

Fire and Emergency could consider initiatives to:

- continue to build skills of brigade leaders, especially among 'old school' leaders, to build and maintain environments that encourage help seeking and foster a culture where it is OK to 'ask for help'
- reinforce the importance of firefighters looking out for each other and their role in creating environments that encourage help seeking
- improve knowledge among firefighters of available support
- enhance the confidentiality of support services to ensure fair and easy access for all firefighters
- train officers in how to debrief effectively so that crews share how they are feeling and officers know how to offer ways of seeking help

1. Introduction

1.1 Background

In late 2014, Fire and Emergency New Zealand reached an agreement with St John New Zealand and Wellington Free Ambulance to attend all life-threatening, cardiac or respiratory arrest emergencies, also known as 'purple' calls, as co-responders.

The intent is for the three emergency agencies to make the best use of their joint resources for the benefit of patients by working in partnership to provide an effective, rapid response to immediately life-threatening medical emergencies. While in some situations ambulances also attend co-response calls, firefighters are often first to arrive, especially in smaller communities where ambulances or police officers are based further away.

A co-response (purple) request can come from either St John or Wellington Free Ambulance, and means that any frontline appliance equipped with a co-response (first aid) kit and automated external defibrillator can be dispatched. A co-response with the ambulance will happen for all purple coded incidents irrespective of which resource arrives first.

Medical first response (MFR) brigades and fire forces have committed to maintain an elevated level of medical response skills and provide a key service in locations where St John have requested support from Fire and Emergency. A MFR is likely to arrive first and provides initial medical care until the ambulance arrives. All MFR brigades and fire forces are located in volunteer only areas, with one exception being Silverdale which is a composite station.

Fire and Emergency has identified the number of medical emergencies, including suicides, heart attacks and respiratory arrests career and volunteer firefighters respond to is increasing significantly. In 2016, there were over 10,000 medical co-response and first response call-outs.

Firefighters, including those with a medical role, are exposed to dangerous and stressful situations and potentially traumatising events through the course of their work (Deanne, Jane, & Ian, 2014; Straud, Henderson, Vega, Black, & Van Hasselt, 2018). There is currently no documented information on the impact of these non-fire incidents on New Zealand firefighters.

1.2 Research purpose

Fire and Emergency commissioned the SHORE & Whāriki Research Centre to undertake this research with the intention of informing actions to strengthen support for firefighters

The findings were anticipated to contribute to recruitment, training and leadership development initiatives.

The specific research objectives of the research were:

1. To understand the impact of non-fire incidents, particularly medical calls, on firefighters, their resilience and the skills they need to thrive and survive
2. To understand the sources of support that firefighters use to manage adverse impacts of non-fire incidents

3. To explore the role of brigade/crew culture in mitigating adverse impacts
4. To explore how new recruits are prepared for the realities of the firefighter role
5. To understand how medical calls impact on volunteers, especially in small communities where the volunteers may know those affected

1.3 Research design

The research consisted of four key steps (see Figure 1):

Figure 1: Research steps



Workshop with Fire and Emergency

A workshop was held with Fire and Emergency key stakeholders to confirm the research design and processes, and to refine the research questions. In addition, key concerns and ideas about the research topic were discussed. The group also identified potential key informants to interview.

Literature review and interview guide development

An overview of literature was undertaken to inform the research. Specifically it focused on the impact of non-fire related incidents on the mental health and resilience of firefighters, and the ways in which firefighters' mental health and resilience can be promoted and supported.

The literature review and discussions with stakeholders were used to develop the interview and focus group schedules. Fire and Emergency provided comments on a draft of the schedules.

The interview schedules are appended (see Appendices 1 and 2).

Recruitment and data collection

Individual firefighters

Advertising for participants was undertaken by Fire and Emergency. Initially, the recruitment advertising was targeted at 20 selected career stations, volunteer brigades and rural fire forces that attended a range of medical calls and represented a mix of urban and rural locations. Invitations and information sheets were sent to Chief Fire Officers and Area Managers who were asked to distribute these to crew and brigade members. Due to low response rates among volunteers the opportunity to participate in the project was promoted via the United Fire Brigades' Association website and the Women in Fire and Emergency New Zealand network. Invitations to participate were also emailed to volunteer firefighters who had joined within the last 12 months to improve involvement by those newer to their roles.

Interested participants contacted the research team either by phone call, text message or email. Interviews were then scheduled at times convenient for the participants.

Telephone interviews with firefighters took place from October to December 2017. All individual interviews were recorded with the consent of the participants.

Māori firefighters' focus group

The focus group members were invited by Fire and Emergency's Pou Herenga Māori / National Māori Advisor and included representatives from the five fire regions. The focus group was held at a marae in Auckland in November 2017. The focus group discussion was recorded with the consent of the participants.

Key informants

Key informants were contacted by the research team and interviews were scheduled at times convenient for them. Telephone interviews with key informants were conducted from October to November 2017. All individual interviews were recorded with the consent of the participants.

Data analysis, rich dialogue process (RDP) and reporting

A general inductive approach (Thomas, 2006) was utilised to analyse the raw data produced from the interviews. This approach began with the transcription of the digital recordings by professional transcribers into written form and ended with the creation of a set of categories. Both the research aims and the raw data guided the data analysis. Data were analysed primarily at the semantic (surface level). The analysis focused on firefighters as a group, but where applicable on specificities in relation to Māori firefighters, female firefighters, and to particular types of firefighters (i.e. career, volunteer co-responders, volunteer first responders).

Draft results were discussed at a rich dialogue process (RDP) (Parker & Duignan, 2002) meeting involving key Fire and Emergency staff and research team members. This process allowed participants to receive the draft research results and deliberate on them before attending the RDP meeting. The meeting was structured to ensure the attendees had joint dialogue and were able to reflect on the research findings and consider their implications. This discussion was drawn upon by the research team as further data analysis was undertaken and the report finalised.

Data extracts in this report have been lightly edited to facilitate reading and to maintain anonymity of participants. Abbreviations are used throughout the report to identify participant quotes: CA = career firefighter; VCR = volunteer co-responder; VFR = volunteer first responder; KI = key informant; M = male; F = female. To assist in protecting the anonymity of Māori focus group members, we report them according to their firefighter role (CA, VCR, or VFR).

1.4 Ethics

This research was conducted under Massey University guidelines, and the approval (NOR17/47) from the Northern Human Ethics Committee for the research was obtained in September 2017.

All participants were fully informed about the study through a participant information sheet, and any questions participants had were answered before the consent form was signed. The voluntary nature

of participation in the study and the non-direct approach from the researchers minimised the risk of people feeling like they had been coerced into taking part in the research.

Phone numbers for free counselling and other support (both within and outside Fire and Emergency) were provided to firefighter participants in case they became distressed after taking part in the research, or they wished to discuss any issues raised during the research interview.

1.5 Participants

Firefighter participants

A total of 44 firefighters were individually interviewed by telephone and 10 firefighters took part in the face-to-face focus group.

Two of the firefighters individually interviewed and all 10 focus group participants identified as Māori. Thirty-seven of the firefighters individually interviewed were New Zealand European/Pākehā or Australian; five did not provide their ethnicity.

Similar numbers of males and female volunteers (first and co-responders) participated, while career firefighters were more likely to be male (see Table 1).

Table 1: Gender of participants

| | Career | | Volunteer: First responder | | Volunteer: Co-responder | |
|------------------------------|----------|-----------|----------------------------|----------|-------------------------|----------|
| | Female | Male | Female | Male | Female | Male |
| Individual interviews | 6 | 17 | 5 | 7 | 5 | 4 |
| Focus group: Māori | 1 | 4 | 0 | 0 | 2 | 3 |
| Total | 7 | 21 | 5 | 7 | 7 | 7 |

The firefighters¹ interviewed ranged from 18 years to 69 years of age.

The length of service of firefighter participants (individual interviews and focus groups) ranged from 1 year to 44 years; 26 (59%) had 10 years or more service.

Over half (61%) of the firefighter participants (individual interviews and focus groups) were from Regions 1 and 2 (see Table 2). Two participants from each region attended the focus group.

Table 2: Location of participants

| Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Total |
|----------|----------|----------|----------|----------|-------|
| n=17 | n=16 | n=7 | n=9 | n=5 | 54 |
| 31% | 30% | 13% | 17% | 9% | 100 |

¹ Excludes Māori focus group participants as age details not collected.

All firefighter participants (individual interviews and focus groups) were offered a \$50 gift voucher for participating in an interview or the focus group.

Key informant participants

Twelve key informants were individually interviewed by telephone. They were selected as people knowledgeable about the research topic. Key informants included people from: Fire and Emergency management and operational roles, union/firefighter groups, as well as others involved in providing support services to firefighters. Some key informants also held firefighting positions.

1.6 Research caveats

As is typically the case when conducting qualitative research, participant involvement was dependent on participants contacting the research team. To counter this, Fire and Emergency advertised and promoted the study extensively to ensure the self-selected sample was drawn from a wide potential pool of participants.

This report reflects the views of the firefighters and key informants who were interviewed, but does not account for the views of all firefighters. Nonetheless, the rich, in-depth and complex accounts provided by the firefighters allowed for a full exploration of their views.

2. Literature review

2.1 Purpose of the literature overview

This literature overview was undertaken to:

1. Determine the impact of non-fire related incidents on the mental health and resilience of firefighters; and
2. Identify ways in which their mental health and resilience can be promoted and supported.

2.2 Methodology

Scope

Published international reviews contained within relevant book chapters, and reports and journal articles were included, along with published and unpublished primary reports and theses.

Search strategy

The literature provided by Fire and Emergency that addressed the areas of interest was read first. Secondly, a literature search was conducted to identify suitable articles and all New Zealand-based research. The following databases were searched: Scopus, Medline, PsychInfo and CINAHL, using the terms and keywords: firefighter/ first responder/ mental health/coping, camaraderie/ trauma/stress/ non-fire incidents/ first responder/co-responder/career firefighter/ volunteer firefighter/ resilience/etc.

The searches identified 55 articles, three manuals and one thesis.

Considerations when reading the overview

When reading this review the following considerations are necessary. The first is the paucity of literature relating to firefighters attending non-fire related incidents. The second consideration is the inconsistent definitions of mental health, trauma and stress operationalised within the studies reviewed. Finally, we found no relevant New Zealand research, which represents a significant gap.

2.3 Results

Impact of non-fire related incidents on firefighters

Negative stress and firefighter's role

Both career and volunteer firefighters frequently attend non-fire related incidents in their roles as first responders and co-responders. These incidents vary considerably and include life-threatening events (cardiac and respiratory), suicide, drowning, road traffic crashes and direct rescue. Such events can be highly demanding and stressful (Benedek, Fullerton, & Ursano, 2007; McLennan, Birch, Cowlshaw, & Hayes, 2009; Regehr, Hill, Goldberg, & Hughes, 2003; Regehr, Hill, Knott, & Sault, 2003) and can overwhelm the firefighter's normal ability to cope (Harris, Baloglu, & Stacks, 2002). Researchers have

suggested “non-professional” first responders may experience higher levels of emotional distress relative to their professional counterparts (Wagner & O’Neill, 2012). The mental health of firefighters can be compromised by experiencing stressful events. Findings from a study of 750 firefighters conducted by Bryant and Harvey (1996) indicated the majority (60%) believed stress was caused by feeling helpless over conditions faced, exhaustion or inadequate equipment and training. Some firefighters indicated fear of being trapped or burnt.

Impacts of being a firefighter include post-traumatic stress disorder, depression, suicide and alcohol use.

Post-traumatic stress disorder

Post-traumatic stress disorder (PTSD) is an acute or chronic stress reaction linked to specific traumatic events (Mitani, Fujita, Nakata, & Shirakawa, 2006). Firefighters in general have been found to have post-traumatic stress rates of 18 to 22 percent compared with an estimated one-year prevalence rate of 3.6 percent in the general population (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). This suggests a highly elevated risk for PTSD for both volunteer and professional firefighters (Wagner & O’Neill, 2012).

Given that firefighters are part of a crew, have colleagues that depend on them and are labelled as “heroes” in the media, this may mean they are less willing to disclose being affected (negatively or positively) by traumatic events (Kehl, Knuth, Hulse, & Schmidt, 2014).

As with trauma in the general population, PTSD is not the only or main response to exposure in first responders. PTSD, major depressive disorder, anxiety (Benedek, et al., 2007; Kleim & Westphal, 2011) and drug and alcohol problems (Welch et al., 2014) are commonly reported among firefighters.

Depression

Research exploring stress and depression among firefighters has received little attention. Depression describes a mood of despondency, inadequacy and sadness. Often associated with loss and failure, depression is a commonly experienced transient mood state, which can, however, lead to a diagnosis of ‘clinical’ depression if intense and enduring (Durkin & Bekerian, 2000). High levels of depression are associated with anxiety disorders, for example PTSD. Firefighters prone to increased anxiety could be expected to show signs of despondency by scoring higher on a test for depression. There appears to be a relationship between hazardous drinking, sleep problems and depression in firefighters (Carey, Al-Zaiti, Dean, Sessanna, & Finnell, 2011).

Suicide risk

Firefighter culture demands that members be mentally tough as well as physically strong. Silence regarding personal problems and the use of poor coping strategies (e.g., alcohol) are often found within the firefighter culture (Henderson, Leduc, Couwels, & Hasselt, 2015). Stigma surrounding suicide is a barrier to seeking help and this can be paired with a traditional ‘toughen up’ workplace culture. There is evidence that people from traditionally male-dominated cultures seek help at lower levels (Smith, Braunack-Mayer, & Wittert, 2006).

Risk factors for suicide for firefighters include: expressing feelings of hopelessness and helplessness; feeling as if they are a burden; previous suicide attempts; increase in alcohol or drug use; changes in

sleeping pattern; social withdrawal or isolation; and anxious or agitated behaviour (Henderson, et al., 2015)

Alcohol use

Alcohol consumption has been reported as common in the fire service and heavy drinking is an accepted part of the culture (Haddock et al., 2012). Studies have found a high prevalence of alcohol use among U.S. firefighters, with up to 89% (n=954) reporting alcohol consumption (Piazza-Gardner et al., 2014). Meyer and colleagues (2012) found 10.6% of their sample (n=142) indicated probable alcohol abuse in the past year, 25.4% indicated lifetime probable abuse, and 40.1% engaged in lifetime problematic drinking.

A number of studies suggest a relatively high prevalence of co-morbidity between involvement in critical incidents (Del Ben, Scotti, Chen, & Fortson, 2006; Monnier, Cameron, Hobfoll, & Gribble, 2002) and drinking behaviour (Jacobsson, Backteman-Erlanson, Brulin, & Hörnsten, 2015) among emergency service workers including firefighters. Findings from a study of 1600 firefighters confirmed a link between the intensity of firefighters' involvement in critical incidents and drinking to cope. The researchers suggested that the variation found across fire service units could be related to the adequacy of unit-level resources (Bacharach, Bamberger, & Doveh, 2008). The results of this research suggest a need for policy makers and practitioners concerned with first responder co-morbidity to take into account organisational factors that may play a significant role in the emergence or exacerbation of first responder drinking problems (Bacharach, et al., 2008).

While people do experience negative responses to stress, there is evidence they might perceive benefits from traumatic and stressful life events (Weiss, 2010) and this could include firefighters. Positive changes have been documented among first responders after critical incidents (Shakespeare-Finch, Smith, Gow, Embelton, & Baird, 2003).

Resilience

Resilience can be defined as the ability to adapt and successfully cope with acute or chronic adversity (Connor, 2006; Luthar, Cicchetti, & Becker, 2000). In a study involving 679 firefighters, those firefighters experiencing high levels of traumatic stress were more likely to perceive their stressors as uncontrollable and threatening, thus leading to vulnerability for developing PTSD symptoms. Those firefighters with high levels of resilience appeared to overcome adversity and were protected from developing PTSD symptoms (Lee, Ahn, Jeong, Chae, & Choi, 2014).

While critical incident exposure has been shown to increase a firefighter's risk of traumatic stress reactions, such as post-traumatic stress symptoms (Meyer, et al., 2012), there is also research suggesting that firefighters may be resilient and experience personal growth following critical incident exposure (Gist et al., 1997). Resilience in the wake of critical incident exposure has been reported as common, with most people able to maintain their usual level of functioning even though they may experience mild to moderate temporary stress reactions (Bonanno, Westphal, & Mancini, 2011). Protective factors associated with resilience/post-traumatic growth and risk factors associated with post-traumatic stress among firefighters exposed to critical incidents were examined by Sattler, Boyd and Kirsch (2014). The study participants were 286 volunteer and career firefighters. The research was guided by conservation of resources (COR) stress theory and post-traumatic growth theory. COR states that individuals strive to acquire, maintain and protect valued resources and can experience stress

when resources are threatened or lost. Resources fall into four general domains: personal characteristics (e.g., self-esteem); condition resources (e.g., social support); energy resources (e.g., physical health); and object resources (e.g., house and car). Exposure to critical incidents may threaten these resources.

Conservation of resource theory posits that when firefighters experience a rich resource base this can facilitate resilience to traumatic stressors and assist their coping. In contrast, individuals with a weaker resource base may be more susceptible to traumatic stress symptoms (Hobfoll, 2012). If key resources needed to cope with the demands of critical incident exposure are lacking, firefighter stress can be exacerbated (Bryant & Harvey, 1996). Post-traumatic growth theory complements COR and suggests exposure to critical incidents may stimulate personal growth, with firefighters experiencing increased awareness of life priorities and positive life changes as a result of thinking about the incident (Groleau, Calhoun, Cann, & Tedeschi, 2013).

Coping

Firefighters' coping strategies influence their levels of risk and resilience when confronted with traumatic events. The use of avoidance and numbing strategies has been associated with higher distress or post-traumatic stress symptoms in firefighters (Brown, Mulhern, & Joseph, 2002; Chang et al., 2003). In contrast, lower distress has been associated with increased use of strategies such as task-focused coping (Brown, et al., 2002), emotion-focused coping (Brown, et al., 2002) and positive reappraisal (Chang, et al., 2003). A coping strategy reported as being favoured by firefighters is seeking support from others, including advice, practical assistance, moral support and understanding (Carver, Scheier, & Weintraub, 1989).

Promoting and supporting firefighters mental health

Several components such as peer involvement, social support and camaraderie have been identified as protective factors for firefighter wellbeing (Sattler, et al., 2014). To promote resilience, existing research from the United States suggests that fire departments could offer firefighters opportunities to strengthen crew cohesiveness and support one another, and develop or devise employee assistance and support programmes to instruct firefighters about ways of enhancing their personal strengths and development of resilience skills. Anecdotal evidence from firefighters has suggested firefighters appreciate social support and camaraderie during critical incident stress debriefing sessions (Cowman, Ferrar, & Liao-Troth, 2004; Huynh, Xanthopoulou, & Winefield, 2013).

Help-seeking

Among the general population, less than 40% seek mental health care when experiencing distress, and only 32% to 55% of these individuals receive recommended care (Institute of Medicine, 2015; Sareen et al., 2007). The percentage of first responders seeking treatment has been found to be significantly lower due to the strong stigma associated with mental illness, perceived possibility of confidentiality breaches, and the culture of self-reliance that is common among first responders (Erich, 2014; National Volunteer Fire Council, 2012). Firefighters may also lack the confidence to approach someone for help (beyondblue, n.d.).

Critical incident stress debriefing

A critical incident stress debriefing (CISD) is a peer counselling group procedure with psycho-educational components that provide information on various stress reactions following exposure to a critical incident. CISD was designed by Mitchell and Everly (1996) and is led by a mental health professional and supported by trained peer para-professionals. The strategy in the group meeting is to begin with material that the participants are comfortable in discussing, leading to more emotionally intense exchanges and concluding with a psycho-educational component intended to bring closure to the group. There has been considerable uptake of CISD by fire and emergency services since its introduction, with mixed findings as to its effectiveness (Harris, et al., 2002).

Conflicting summaries of the research evidence on debriefings have been published (Gist, et al., 1997; Mitchell & Everly, 1997; Ostrow, 1996). The majority of findings have been neutral or negative due to lack of reliable evidence that debriefing prevents adverse psychological reactions (Foa & Meadows, 1997). A study conducted by Halpern and colleagues (2009) reported that emergency medical service personnel found peer and supervisor debriefing within 24 hours more helpful than CISD, which generally occurs 24-72 hours later. The authors also noted that the formality of CISD may cause a person to bypass natural internal processing and natural social support. In short, people feel much more comfortable exposing themselves emotionally to their peers than to a stranger.

Other studies have highlighted the usefulness of CISD in educating firefighters about stress symptoms, coping techniques and the creation of an environment conducive to discussing traumatic events (Hokanson, 1997). Findings from a study conducted by Hokanson and Wirth (2000) provided evidence that the CISD process was helpful and those debriefed had significantly faster recovery from symptoms than those who were not debriefed. While there is evidence that emergency responders for the most part appreciated and were pleased with debriefings, the same effect can be achieved through both informal and formal review processes and social support.

Sattler and colleagues (2014) found that attendance by firefighters at critical stress debriefing sessions was negatively associated with post-traumatic stress symptoms and positively associated with post-traumatic growth. They noted that critical incident stress debriefing includes many components such as peer involvement and social support, making it difficult to determine which features contribute to the association.

Social support

Social support is significantly related to mental health among first responders, is a resilience factor in the aftermath of potentially traumatic events (Kleim & Westphal, 2011; Meyer, et al., 2012; Prati & Pietrantonio, 2010), and has been widely researched amongst firefighters (Armstrong, Shakespeare-Finch, & Shochet, 2014; Avsec, Novak, & Bajec, 2012; Meyer, et al., 2012).

The nature of such support for firefighters is "somewhat unique" and is "a consistent, long-term, highly-defined social network [which] might be compared with a family or kin system" (Corneil, Beaton, Murphy, Johnson, & Pike, 1999; Regehr, Hill, Goldberg, et al., 2003; Regehr, Hill, Knott, et al., 2003). Both organisational and family social support had a protective effect on American and Canadian firefighters with multiple exposures to traumatic events (Corneil, et al., 1999), while low social support and/or high relational conflict indicated a higher risk of poor mental health (Beaton, Murphy, Pike, &

Corneil, 1997). Certainly, experiencing a sense of being supported by an organisation, peers and other social contacts leads to lower levels of distress (Regehr, Hill, Knott, et al., 2003).

There is some controversy in the literature, as the mechanisms by which social support is related to adaptation are unclear. For example, social support can occur through the process of talking through the stressful event and/or it can occur at the time of the event. The perception that others can and will provide the necessary help may redefine the potential for harm or danger posed by a situation and/or reinforce one's self-efficacy (Prati & Pietrantonio, 2010).

Camaraderie

A culture of camaraderie and loyalty is common amongst firefighters and many feel a strong sense of purpose and connection with their communities (beyondblue, n.d.). Camaraderie including "elements of trust, common identity and understanding along with general positive social bonds" (Tuckey & Hayward, 2011, p. 17) was found to be protective against psychological distress and burnout. As emotional demands increased, so did the protective power of camaraderie. Minimal effects were seen when emotional demands were lower but greater effects became evident with higher demands. Thus, Tuckey and Hayward described a culture supportive of camaraderie as "crucial for creating a foundation from which team resilience can grow" (p.17).

Findings from a qualitative study conducted by Yarnel and Dowler (2002) indicated firefighters share a strong sense of belonging, brotherhood, fun, fellowship and friendship with other firefighters. These characteristics were considered to reinforce a notion of team that embodies trust and confidence. The fire station itself was a source of socialisation where firefighters spent a lot of their free time.

Sense of community

Volunteer firefighters in rural communities are motivated to help and make a contribution in their communities. Findings from a qualitative study conducted by Haski-Leventhal and McLeigh (2009) showed that volunteering in the community by firefighters was enhanced by several factors: transformational leadership; organisational commitment; group affiliation; and sense of community. Both career and volunteer firefighters in the study expressed a strong sense of community and of caring for the wellbeing of their communities. One firefighter described the gratitude he received in serving in a small community:

Without volunteer firemen in our community, we would not have a fire service. That was the main thing that got me started in the first place. When I first began this I didn't realise that once you go out and help people, the feeling you get when you do help. You meet these people later down the road, and they thank you, and they remember you. That's pretty much the reason I'm still a firefighter ... I feel good when I go to bed at night knowing that I ... may have helped somebody. (p.87)

Good practice principles

A number of principles of good practice to support the mental health and resilience of firefighters have been identified. These are: shared responsibility; modifying risk and protective factors; building organisational resilience (a strengths-based culture); and an integrated, holistic approach that promotes the mental health of all responders (beyondblue, n.d.).

Other principles identified in the literature include:

- Assuring confidentiality to enable firefighters to reveal being affected by traumatic incidents (Kehl, et al., 2014)
- Leadership style and behaviour of the fire chief is related to teamwork effectiveness and satisfaction among firefighters in a department (Bartolo & Furlonger, 2000; Useem, Cook, & Sutton, 2005).
- The adoption of peer counselling or support programmes that aim to recognise signs and symptoms of mental health concerns and suicide risk (Henderson, et al., 2015).
- Psycho-education on stress and stress management and the promotion of proactive coping strategies (Henderson, et al., 2015).
- Fostering a culture of “It’s OK to ask for help” (Henderson, et al., 2015).
- Encourage firefighters to look out for each other.
- Encourage open, honest and genuine discussions around the station and at meetings to build trust.
- Encourage experienced firefighters to share appropriate information, knowledge and stories about their experiences and ways of coping.
- Provide information on help-seeking services.
- Look out for each other and talk to firefighters who may be struggling, particularly where changes to ‘normal’ behaviour are observed (New Zealand Fire Service, 2016).
- Foster good mental health and wellbeing in the fire service (beyondblue, n.d.).

In summary, the literature highlights how the experience of traumatic events can impact firefighters’ mental health in challenging ways. There is also evidence that firefighters are resilient and have a range of coping strategies and support. They also experience personal growth in their roles.

3. Research results

3.1 Overview of results, domains and thematic map

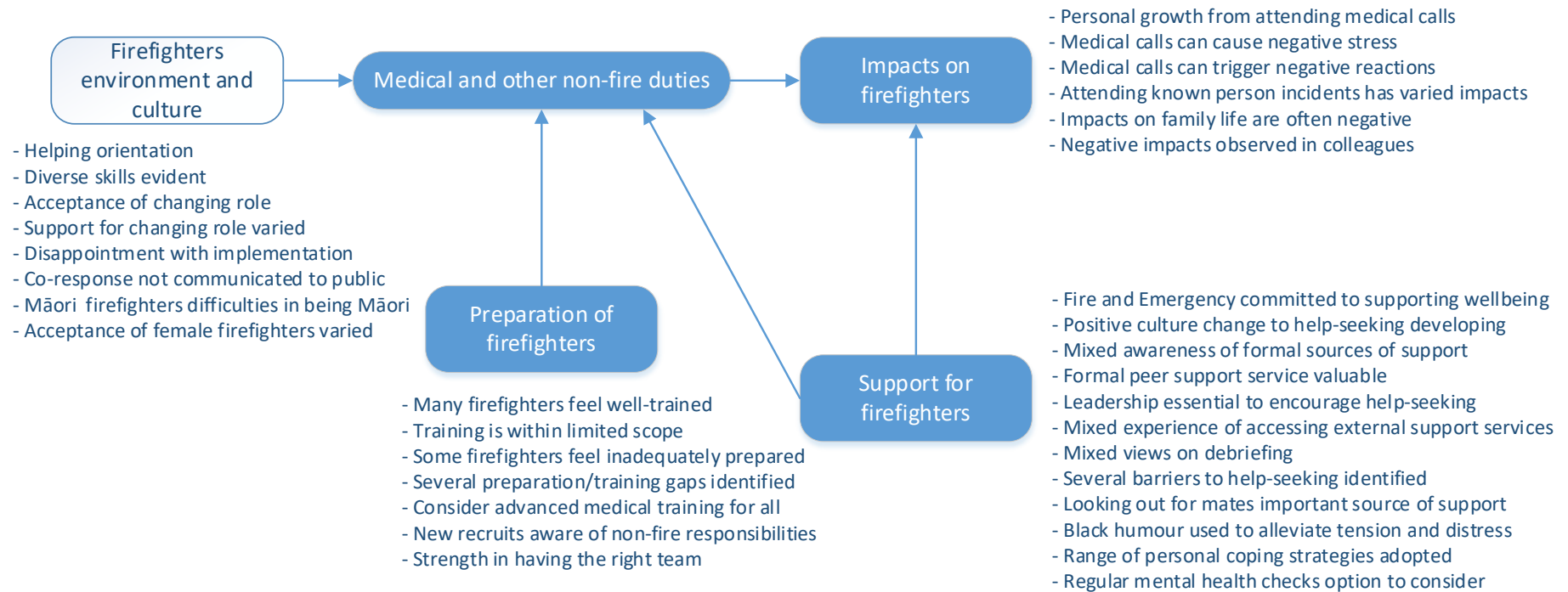
The research results are presented under four domains:

- Firefighters, environment and culture (see 3.2)
- Impacts on firefighters (see 3.3)
- Preparation of firefighters (see 3.4)
- Support for firefighters (see 3.5)

The thematic map below reflects that firefighters come to their role with attributes and skills, and their medical/non-fire role has impacts on them. These impacts are moderated by preparation for their role and the support available to them. The map below also summarises the key findings in each of these domains.

Figure 2: Results thematic map

Understanding firefighter wellbeing



3.2 Firefighters, environment and culture

Summary

Firefighters reported a very strong motivation for them was helping others. Many identified attending medical calls was a key role for a modern emergency service and was another way they were able to help others. Some resistance to an increasing medical role was noted and typically the medical role was described as not what some firefighters had 'signed up for'. The introduction of the medical function was viewed as having been poorly communicated both to firefighters and the general public. Difficulties for Māori within Fire and Emergency were identified primarily as discrimination and the lack of cultural awareness and understanding of Te Ao Māori exhibited by non-Māori personnel contributing to a view that workplaces for Māori can be unsafe. Firefighting was identified as a masculine domain with varying levels of acceptance for women firefighters across brigades.

Key results

Firefighters motivated by helping others

Most firefighters who discussed becoming a firefighter identified factors such as helping others and/or serving their community as key motivations for them to be involved in firefighting.

It's good when someone's in need, to be able to go along and help them out and make a bad situation, and try and make it as good as it can be in the circumstances for someone, some situations are just not going to be good no matter what but I think if you can just try and do the best job you can and make it as easy as you can for them. (CA_M)²

... helping people that's obviously what a lot of us do it for, because we have a passion to help people, so definitely seeing the job we're doing is making a difference. (VVCR_F)

Firefighters were primarily motivated by the challenges of attending fires - for them attending fires was 'their' prime role. Many identified the excitement of being on the truck to attend these events. This was an enjoyable part of their role and the part of the job they felt they were well trained for.

A good burn, a good house fire. (CA_M)

I love when the siren goes off I get to go on a big red truck with my friends. (VVFR_M)

... fires are the fun part of the job ... (CA_M)

I mean fire calls are always exciting, those are enjoyable times. (CA_M)

Going to the really, really big exciting, everyone talks about jobs, there's nothing, as crazy as it sounds firemen like to do what they're trained to do, so nothing makes a

² Abbreviations are used to describe participants: CA = career firefighter; VCR = volunteer co-responder; VFR = volunteer first responder; KI = key informant; M = male; F = female. To assist in protecting the anonymity of Māori focus group members, we report them according to their firefighter role (CA, VCR, or VFR).

group of firemen happier than having just been to the big one, that's what I enjoy and you get, something exciting happens and you get invited. (CA_M)

Very few firefighters identified the challenge of attending medical calls and other non-fire incidents as something that motivated or excited them. Among those that did, contributing to a positive outcome was noted as being important. One firefighter regarded it as a privilege to be able to assist through attending medical calls.

Driving the trucks to calls, calls are awesome, the excitement of going to a call and every call is different, no matter what it is. (CA_M)

I guess, it's that basic sense of achievement, I mean if you respond for example to medical emergencies and you're able to revive or resuscitate someone's family member, there's a huge sense of satisfaction and a sense of achievement in helping someone and improving the situation that we're attending. (CA_M)

For me I feel like that's quite a privilege, so I know that when you lose someone that you love you remember a lot of the details of that day, and so for me I see that as a privilege, you know that that person will remember that day her husband died, actually it was a fire truck that came first, and they were really kind and they helped me ring my son, you know, like I think that's a privilege to be in that position, so you know, although it's not always great ... I guess I don't see it as all bad at all, I see it as a little bit of a gift in some way. (CA_F)

I enjoy helping the public, so I don't dislike these [medical] calls. (CA_M)

Many firefighters reported they were held in high esteem by the public and often enjoyed a positive relationship with communities. This was viewed as being somewhat different to the experiences of other emergency services.

I believe we're the most trusted profession out. (VFR_M)

Just knowing that we've been able to help someone, yeah I think we're still up there in one of the most trusted professions in New Zealand and so when we do get the opportunity to get out there and help people and do what we're trained to do it's super rewarding. (CA_F)

It doesn't matter where you go in the country, you're welcomed with open arms, it's bloody awesome ... It's pretty rewarding, better than being a cop, I'd never do that role ... apparently, the ambos get beaten up, I worked with quite a few, even women who've had noses broken and eye sockets broken, and arms broken. (CA_M)

Diversity of technical and 'soft' skills evident

Firefighters reported bringing a range of skills acquired from other work roles. Among the career firefighters several had also been volunteer firefighters or ambulance volunteers with St John. A few also had police or military backgrounds. One participant was fluent in sign language and would be called in to work with deaf people and the hard-of-hearing. He was also able to help those communities get special smoke alarms which flash a light and vibrate the bed to wake people up.

Volunteer firefighters also have other jobs so brought those skills into their role. Volunteer participants reported that many firefighters brought a range of medical skills as some were also ambulance volunteers and nurses.

Skills brought by firefighters included: good listener, empathetic, leadership skills, team player, communication skills, training experience, how to deal with emergency situations, dealing with people in tough times, not being too phased when something bad happens, leading by example and mental strength and resilience, training others in emergency medical situations, and skills in management or a trade.

It was seen as a strength to have well rounded individuals working as firefighters. There was a suggestion those with more life experience were more likely to be able to deal with the stresses and challenges of their role.

What I notice is individuals who appear to be quite resilient have had good life experiences, they may have travelled ... people that have experienced life, either travelled or had different occupations before the fire service, they're active so they're fit, and they look after their diet, so the firefighters that do that tend to be, for me seem to be the ones that are coping, and have this attitude of going to a suicide, actually you know we're doing, we're trained for it and let's go and do what we're trained for, whereas the ones that are unfit, don't go in the gym, have poor diets, you know, and the fire service has been their only gig, and don't have much life outside the fire service, those are the ones that are struggling. (KI)

Soft skills were discussed by both male and female firefighters. Accounts from a few female firefighters suggested they were perhaps more able than their male counterparts to draw on certain life experiences when dealing for example with grief.

I've found ways in my life experience to communicate, especially in those times of grief, and sometimes it might sound sexist funnily enough, but a woman can bring that to an incident, just that ability to relate ... (CA_F)

Some female firefighters resisted gendered stereotypes and assumptions that only women could offer those skills.

... one of the officers tried to tell me that if there was a distressed female at a CPR incident then because I was a female then it would be my role to help them ... and like, I don't have kids so I'm not like maternal or anything like that so for me I'd far rather do CPR which is what I'm trained to do because I don't feel like I'm equipped to help distressed people, like I don't know what to say, I've never been in that situation, so I found that really hard, I mean it all got sorted out in the end and it didn't come to anything because I was like, I'm not going to do a job based on the fact that I'm a female, I'm part of a team, there's no gender specific role but that has been quite challenging and I think it's, think it's a locational thing, I don't think it's like this right across New Zealand. (CA_F)

Firefighter roles acknowledged as changing

The firefighters identified a wide range of incidents other than attending fires they were involved in - these included rescuing people trapped in motor vehicle accidents, attending medical calls, attending suicides, rescuing animals and installing fire alarms.

... we go to a lot of non-fire incidents and always have, you know, a motor vehicle accident is a non-fire, we do a lot of storm damage, we do lift assists, I've rescued builders off roofs, I've rescued so many cats, the guys, I was on yesterday, the guys rescued a cat wedged behind a hot water cylinder, I've rescued a horse and a cow stuck in a mud bowl, we go to aircraft incidents ... we go to chemical spills ... I've decontaminated some really bad looking gang members, and I've decontaminated little kids. (CA_M)

It was noted the balance of work between fire and non-fire incidents varied between stations and some stations were much busier with fire and other work than others. Manly (a volunteer first response station) was identified as an extremely busy volunteer station, and South Auckland and West Auckland to a lesser extent as areas with a high amount of incidents across fire and non-fire incidents.

I think the fire service needs to consider allowances for this type of work, especially in places like Manly where it's massive, because it does impact on individuals, so we need numbers if that makes sense, to reduce the impact and demand on individuals, but previously we were down to really short, so we were on for four nights a week, one crew, then you'd swap over and do the whole week and the next weekend, so it is really demanding. (VFR_M)

So, in Auckland the hotspots are really only South Auckland and West Auckland ... I hate to say it, but they have ... low-income families, they seem to be where the deaths or where all the fires are happening. (CA_M)

... you can work in Mangere, South Auckland, and go to four to five fatals in a shift ... (CA_M)

The agreement between Fire and Emergency and St John New Zealand and Wellington Free Ambulance to attend all life-threatening calls is a significant marker of the evolving role of firefighters. Some participants noted this change in role was possibly because they were attending fewer fire incidents than previously. This was viewed as a positive reflection of the success of NZ Fire Service's previous campaigns to educate organisations and the general public about fire prevention and safety.

Well I've been a firefighter now for 14 years, and I have found that the role has changed, what I would consider significantly in so far as we're going to a lot more, well less fires and more medical calls, so most of my fires where we actually have to do something are few and far between, whereas we're turning out to motor vehicle crashes, where people are trapped and CPR or heavy lifting for helping out the ambulance . . . it's still a very enjoyable job but yeah, it's not what it was like 14 years ago, and that wasn't long ago. (CA_F)

The formal introduction of an enhanced medical response programme (consisting of co-response and first response) was discussed by several participants as a natural evolution of the firefighter's role. Several participants noted fire incidents are in decline in many parts of the country. The changing role was also seen as fulfilling the 'rescue' part of Fire and Emergency responsibilities.

If we look at the jobs we're doing, working jobs that we are doing, it's [medical calls] making up, I'm just guessing, but it's probably a third, a quarter to a third, of the working jobs that we go to are medical calls, we're probably averaging a couple a week on my shift so out of four shifts we might get two heart attack calls if you like, two medical calls, sometimes it can be four or five or six, could be one or two a day on a busy set but it averages around one every second day and so makes up a significant part of the work now. (CA_M)

One informant noted the description 'firefighter' was no longer accurate given the more diverse range and balance of responsibilities now performed.

... even the title firefighter is now a misnomer because many volunteer brigades and some career stations, most of what they do is actually not fire fighting, so whether the name will actually change, it's not an accurate designation of the work that we do, and if you look at the whole range of work that firefighters do, which is rescues, motor vehicle accidents, medical calls, community fire safety education and so on, fire fighting is a small and ever decreasing component of the job, to the point where firefighters don't in a sense attend enough calls now, enough fire calls, it puts them at greater risk because they don't have the knowledge and experience that firefighters used to have, going to structure fires and building fires on a regular basis ... (KI)

Variable support for the co-response medical role

Responding to medical calls was viewed positively by many firefighters. It was typically understood as consistent with the desire to help and to serve others.

I mean if you respond for example to medical emergencies and you're able to revive or resuscitate someone's family member, there's a huge sense of satisfaction and a sense of achievement in helping someone and improving the situation that we're attending. (CA_M)

Several participants identified pushback and resistance to an increasing medical role among both career and volunteer firefighters. A particularly strong view was expressed about some older firefighters who were typically characterised as resisting a medical role on the basis of 'this was not what we signed up for.' A number of participants also shared how some volunteers ignored calls of a medical nature. This type of resisting/avoiding behaviour was not reported among career firefighters.

There's a large portion of guys, particularly the older guys don't like it, because they've come from, and in all fairness there's not many left, but you know they came from the days when they just didn't go to those things, and now you know they've been to the odd one, they've been to them but now that the frequency has increased, they go, they do their job, they're not that fussed on it, but you know, I've never seen anybody stand in their pod and say, I'm not going to that. (CA_M)

I know some chaps that if they see in the pager it's a medical they won't turn out because they've seen too many deaths, so, it's actually affecting their experience of being volunteer. (KI)

There was recognition that firefighters has previously supported ambulance staff at medical incidents when requested (mutual aid). Extending the medical calls to co-responder brigades was seen as upscaling of formal involvement in responding to medical needs. A key point noted was that purple calls attended by co-responders are identified by participants to have a poor outcome in respect to patient outcome. This was viewed as different from the outcomes experienced by first responders and ambulance services where they experienced more positive outcomes because they responded to a range of medical calls, not just purple calls.

... career firefighters [were] telling me how they're finding it difficult to go to medical calls, but they only ever go to code purples, and code purples are the most serious calls of the lot, and most cases in code purples are cardiac arrests and you don't get the deceased back ... we do everything from code oranges, up through code reds, even go to the odd code green which are low acuity calls, and that's where we get a lot of positive feedback ... we get more positive feedback from medical calls than we do from fires funnily enough, we get people coming in with boxes of chocolates, baking everything you can think of including very surprisingly generous donations at times, saying thank you so much ... now the career guys are not getting that ... you know all the negative stuff, that's all the co-response brigades ever get and that's, listening to them I thought, now I do understand why you're not happy about it. (VFR_M)

Disappointment with implementation of the co-response medical role

Many firefighters reported there was no forewarning about undertaking an increased medical role. This was most strongly reported by career firefighters. The change in role was identified as being a sudden change. The firefighters did not make links between whether their perception of communication impacted on their acceptance of the role; however, because the issue of communication about the change was raised often, this suggests it is at least a 'contextual factor' in respect to understanding the introduction of co-response.

We weren't really [prepared for medical callouts] it sort of got sprung on us, and that would be the general consensus from the word go, there has been some resistance to it in some stations in some areas in New Zealand, but yeah we felt that it was quite sprung on us, we didn't really get any, didn't know much about it at all prior to it happening, it was just sort of, I mean we were attending these calls and that was news to us sort of thing, so it wasn't communicated very well at all. (CA_M)

I think the fact we just weren't warned about this was going to happen so and I think that's been made very clear to the organisations that it wasn't well done ... (CA_M)

... this sounds unbelievable but it's actually totally true, there was no communication to the workforce that fire crews would be attending medical calls, and even some of the managers didn't know. (KI)

The sudden change was often linked by firefighters and some key informants as contributing to firefighters feeling unprepared and not confident with the skills they have. The perceived fast roll out

and the extension of medical role being poorly communicated meant that although the firefighters reported they were skilled and well trained in CPR and how to use a defibrillator, many felt mentally unprepared for their medical co-response function.

The biggest fall down is when we rolled out medical response, it just wasn't really well communicated in advance that's what the plan was, it just came kind of ... just happened all of a sudden and they didn't feel mentally prepared for it. (KI)

There was never any conversations about, possible safety health and wellbeing implications for firefighters attending medical calls, and a new type of work ... we have been over the last four years playing catch up, so while ideally we would have been in a proactive educational forming mode, a lot of what we've had to do is be quite reactive, literally the ambulance at the bottom of the cliff type of stuff, rather than a protective fence at the top. (KI)

One participant noted apologies about this processes had been made.

But, there has been an apology from the Chief Exec and National Commander which I think it's helped in some way. (KI)

Co-response medical role not well communicated to the public

A number of firefighters reported that in addition to poor internal communication of the changed responsibilities, communication to the general public was poor. Several firefighters reported the public were unaware of Fire and Emergency's co-response role with ambulance services; many shared how members of the public appeared confused when a fire truck showed up when they had called for an ambulance.

I think having the same sort of experience where increasing amounts of medical calls or cardiac arrests or car crashes, especially car crashes and I think hence the need for that change and focus for it being, you know, acknowledging Fire and Emergency, so people can you know, people do sometimes get a bit surprised when a fire truck turns up at their house, when they've called an ambulance, and you know, as I guess the public become aware that we will get called to these things, it does make it a bit easier. (VCR_F)

... the big red truck turns up ... and, they don't actually call for the big red truck, they call for an ambulance, that's the other thing ... they say, what are you doing here? Well, we get pinged automatically, we never make the decision to go to these jobs, somebody above us does ... it is confusing for the public, they never ask for a big red truck ... so we've been to jobs before where we've been asked what are you guys doing here? How do you know? We're it, sorry ... the ambulance will be here shortly but we're here, we're it ... it's probably a bit daunting when you see six jokers, or four jokers running into a house and then start providing CPR even to a lady or an elderly lady and then, yeah having to do the necessary things and trying to keep her modesty to herself and all the rest of it. (VFR_M)

... it was a failure by the fire service to actually be honest and open and direct to the public around that, made it really difficult, really, really difficult and they still haven't done that, they still haven't done it, it's unbelievable. (KI)

Māori firefighters not able to 'be Māori'

Māori firefighters spoke about the difficulties of being Māori within Fire and Emergency because of discrimination and a lack of cultural awareness and understanding of Te Ao Māori exhibited by non-Māori personnel.

... another one is us being Māori, they can't understand our culture, protocols, everything else like that and that's very frustrating, especially when there's things going on or you come together as a group where like karakias ok we, you know it's so awesome having those sort of things but when I mention something Māori they all go, oh, whatever ... (VCR_F)

Some Māori firefighters provided examples of difficulties and negative experiences they encountered when joining a brigade. A young volunteer firefighter reported his experience when joining a brigade where the other firefighters were much older.

... and being Māori, it was even harder when, some they just wouldn't want a bar of it, and it was really, really hard to fit in, in a group of guys born and raised rural, who would literally argue with me, over Māori, Māoridom, Māori practices, and the Māori language ... it's something I really struggled with in my first years in the brigade. (VVCR_M)

One Māori career firefighter commented when he joined a career brigade he was the first Māori in that brigade and it remained so for years. He pointed out racism still exists and is experienced by Māori firefighters, however there are other positive things occurring.

Training's got a lot better, and the cultures, people are, accepting Māori things ... but there still is that element of racist, there still is that ... you can see them seething about it, but I just man right in their face with it ... just laugh, but yeah there's heaps of good things happening ... (CA_M)

These comments about racism were echoed by another career firefighter who pointed out how things had improved over time; for example, brigades are increasingly reflecting the make-up of communities and are more culturally diverse. He also identified the importance of providing workplaces and environments in which firefighters feel safe.

... when I joined the brigade as a rookie, there was blatant racism back then, and as a rookie you keep your nose clean, and you bit the bullet, it was really hard, very hurtful, but in the brigade I learned that if you want to survive you need to do that sometimes, and then after a few years when you acquire a little bit of service ... things change a little bit ... for us to be effective as an emergency service, we need to have as much cultural awareness to reflect those cultures in our community ... and the cultures I'm talking about in the fire service include the gender culture, religion, races, ethnicities, all of it ... and what I believe is important is that every firefighter should be aware that when they come to work, it should be a safe environment for them. (CA_M)

Māori women reported being Māori and female in Fire and Emergency was positive for women but not easy.

... you're making way for other women coming through, and I was the same in mine, I got a hard time when I started, cos I was the first female there, but I wasn't willing to compromise, I shut my mouth cos I was part of that shut up generation, and put up, and I did for a certain amount of time, I don't anymore, and I am as qualified as those men that sit next to me, I haven't taken a rank because it's an old boys' club, you know, I'll do it when I'm ready, not when they say I'm ready, but we have all of those sort of positives, that's what keeps me going forward ... you're paving the way with your Māoridom and the way that you practice, and you're being the first female coming through, and our organisation is accountable for that, we play catch up now ... they're looking at recruiting a workforce that reflects the people that we serve. (CA_F)

Acceptance of female firefighters varies

The female firefighters interviewed described the level of acceptance of women as being varied across brigades. Women who had been in different brigades described being well accepted in some, but not so accepted in others. Some female firefighters reported difficulties they experienced 'fitting in' when they first started and this was often associated with being the only female on the crew. It could be quite challenging being in a brigade that was less accepting of female firefighters.

... you know I'm a massive minority in the organisation, and there's you know, what I would describe as quite a monoculture in this organisation, and I probably sit outside of that, so that's probably the biggest challenge I think, is just that I'm different to a lot of other people, in I guess an organisation where differences aren't really, you know, they're not celebrated you know, not seen as a strength, so I would say that's my biggest challenge. (CA_F)

A female firefighter with a military background reported how surprised she was by the attitude of some men towards women.

... the station I'm at now I found that there's been a lot of old school attitudes that like even to the point where a couple of people think that females shouldn't even be in the job, so that's been really difficult for me because I don't see myself as any different to any of them there and all I want to do is be treated as one of them. (CA_F)

Women in brigades who felt accepted spoke about how this was not the case for all women. One female volunteer firefighter commented how fortunate she and other women in her brigade were.

No one has ever treated me any differently within my own brigade, you're just one of the team ... so they don't look at you as just a female ... it's not always the case in some brigades but we're very lucky here ... cos it's definitely like that. (VCR_F)

Another female firefighter who got on well with her crew spoke about sometimes having to prove herself when they went out of their area.

... I'm the only female based here at my station and all up there's just over 40 guys, I mean I have a really good crew that I get on with really well but sometimes when you go

out of area, it's like you've got to prove yourself just being a female, it's like sometimes you feel like you've got to do things to do it to be equal, but I don't feel like that with my own crew. (CA_F)

As mentioned previously, many female firefighters experienced gendered expectations from some of their male counterparts. Some women who were the only female on the crew fitted in perfectly and that was sometimes associated with fulfilling the 'mother/mum' figure and role; they felt satisfied being in that role and did not report difficulty with these gendered assumptions and roles.

I think that because I am the female or mother hen in the fire brigade for us that a lot of the guys will catch up with me or will offload on me. (VFR_F)

A number of female firefighters spoke about their role as a listener for crew members who would talk about issues in their lives. One participant shared how female career firefighters who were also officers reported they were often approached by crew members wanting to talk.

They're sort of seen as a safe place to chat about stuff generally. (KI)

Other female firefighters provided examples of being uncomfortable with the gendered stereotypes.

... if there were jobs to do for example and this is what gets me all the time, if it's something to do with running raffles or something to do with promotions who do they call on? It's the woman, and this really gets to me ... (VCR_F)

3.3 Impacts on firefighters

Summary

Firefighters reported non-fire incidents such as medical calls, motor vehicle accidents and suicides largely had negative impacts on them and their families; however some positive impacts were reported. The medical calls attended by co-responder brigades are purple – these are reported to have a high death rate. Being perceived as 'the good guys' who help and support the community affects firefighters attending purple calls where both the community and firefighters may have unrealistic expectations of a good outcome. A number of firefighters reported knowing the likelihood of a poor result contributes to anxiety about their performance and self-doubt (feeling they have not done enough to help or they could have done better, or self-doubt they might have made some mistakes). The impacts on personal and family life were typically regarded as negative. Many firefighters shared their observations of the negative effects the medical role has had on their colleagues.

Key results

Personal growth from attending medical calls and non-fire incidents seen as a positive impact

Several firefighters reported their experiences of being a firefighter had a positive impact on their personal lives. These positive effects typically centred on firefighters valuing and appreciating their life and families.

... you kind of just appreciate life so much more, and your family and you just, you hold things dearer to your heart, you can see how life is snuffed out in an instant, and it has no rhyme or reason, it just happens so you kind of, I don't know I appreciate things more, I make sure I utilise every day as much as I can, and do things I enjoy doing. (CA_F)

Within my personal life it makes you realise that sometimes life is too short and to just do that little bit more, push a little bit more, or try a bit harder, enjoy your own life and make sure your kids learn from the mistakes that you are encountering. (VCR_F)

Some firefighters reported experiences and skills learned on the job meant they were more able to cope with emergencies in their personal lives.

... you kind of take for granted when something happens in your personal life that you are just more well equipped to deal with it, you don't panic as much and think a bit more practically and sensibly and things like that. (CA_M)

I think it makes me ready for anything at any time. I'm aware too that if I'm out at an event, that people will look to me as someone who might be able to help, so like I keep my wits about me ... so people know if something goes wrong, and I like to be ready if something goes wrong you know, and that's the expectation too, like in the workplace or wherever that she'll know what to do if someone has an incident. (VCR_F)

Medical calls can cause negative stress³

The context for medical calls was provided by some key informants. Purple calls were identified as a particular type of medical incident with a high death rate, namely, cardiac arrests and respiratory arrests. The career and volunteer co-responder medical response roles are focused on responding to these types of medical calls, while, by comparison, volunteer first responders have a wider medical responsibility. There were a number of dimensions identified by firefighters that contributed to negative stress: limited chance of success for purple calls, anxiety caused by receiving and attending medical calls, challenges dealing with people and families, 'what is seen, stays seen', non-medical calls can also negatively impact firefighters, and negative stress is cumulative.

³ A considerable academic literature on stress and occupational stress has identified that both positive (eustress) and negative stress (distress) explain the total stress experienced by individuals (e.g., Le Fevre, Matheny, & Kolt, 2003; Saksvik, 2017). Firefighters tended to use stress as a descriptor of negative stress/distress. To avoid confusion, we use the phrase negative stress in our reporting.

Limited chance of success for purple calls

It was noted success stories among career and volunteer co-responder firefighters were limited, whereas the ambulance service which deals with all types of medical calls is more likely to experience positive outcomes.

... so they [ambulance service] get a lot of success stories, so they have a lot of good news stories whereas we do such a narrow band, at the most critical end of the spectrum, your heart's not beating or you're not breathing, that's all we go to primarily, so we don't get too many good news stories. (KI)

So the majority of Fire and Emergency New Zealand brigades just back up St John or Wellington Free if you like, to the purple jobs, which are cardiac arrest and respiratory arrests so it is always the bad stuff, they don't get the good stuff like St John do as well, like the fixing up a cut, the good stories, like nine times out of ten when we turn up at one of them, the person is deceased already. (KI)

And I think the challenge really is that only 15 percent of patients survive cardiac arrest, so I think the challenge is that there's usually poor outcomes ... (KI)

A number of firefighters referred to the negative stress they often felt when attending a purple call as being due largely to the limited possibility of patient survival.

... I mean I just told you that of my maybe 50 CPRs in the last few years, I haven't brought one person back yet, so I'm working on this person, this person's loved one, and chances are they're not going to make it, and these people are full of hope and they're relying on us to get a result, so that's probably one of the heavier aspects for me (CA_M)

The low success rate with purple calls negatively affected their psyche compared with the positive feeling of success they felt after putting a fire out.

... we're geared up to go to an incident, like a house fire for example, to render assistance, so we walk away from that kind of incident with a feeling of like we did something, we put the fire out you know, we've tried our best to save this person's house and belongings, and whomever was involved so it's like a positive, whereas you walk away from a CPR job, and most of the time you're not getting a positive result, so it affects your psyche, you kind of walk away with like a bit of a negative, not a negative feeling but just a bit of a down feeling because you haven't been successful, and we're so used to that walking away and thinking yeah we did a great job, whereas we walk away from the CPR, it's not necessarily anything to do with what we did at the job, it's just the result that was always going to happen, and that's hard to deal with because it's not in our, it's not in our psyche, and we didn't have a chance really to, to psychologically prepare ourselves for that, as an organisation. (CA_F)

Anxiety caused by receiving and attending medical calls

While firefighters often reported attending fires as exciting and challenging, medical calls were seldom reported this way. Many firefighters reported calls to attend medicals induced anxiety. A key concern was the uncertainty about what they would find at the incident and whether they had the right skills and training to deal with the incident.

I think most fire fighters, unless they have a medical background or are not particularly phased by anything will feel the same way that I do in that, if we get called to a job and it is a factory fire, person reported and we can see the smoke in the distance and we know this is a goer, there is certainly a little bit of apprehension but it is mostly excitement and let's roll and do this, this is what we do kind of thing, whereas medical calls, anxiety comes in straight away because we have just been thrown in the deep end here and it is not what we have signed up for, we haven't had really regular training in this sort of stuff to deal with it and I think more fire fighters feel nervous on the way to a medical than they do to a consumed fire. (CA_M)

... on the medical side definitely it is more apprehension or nervous about what you are going to find and how you are going to deal with it, but again, being a little bit more experienced you kind of think, I only know what I know and we know what we can deal with, let's just dumb it down and help out and get on and invariably it is all good. (CA_M)

Another common explanation of anxiety for firefighters was that, in their experience, a positive medical outcome for the patient was unlikely.

Yeah, like we haven't had a win and we haven't brought somebody back, the closest we got was a gentleman, we stabilised him three times and we got him to the ambulance and as soon as the ambulance door closes, and they go, we count it as a win. (VFR_M)

One firefighter wore a Fitbit that recorded his heartbeat – he spoke about how his heart rate varied according to the type of incident they were called to.

... hey this is a car crash, your heart rate peaks and when the siren goes off or in the middle of the night you wake up suddenly, it peaks all the way up to one hundred and fifty, one hundred and sixty and you just start travelling to the station it will drop down, you get to the truck you just get a nice steady alert level and like comparing it to a purple where it peaks real high, it goes down again on the way to the station it just peaks even higher once you read the slip or the text message that just says purple, yeah, afterwards your gut drops, you try and think of what kind of house it is, who to expect, you think about who's on your truck a lot more and if it's some people who have never been to a purple one, your gut will drop a little bit more, I feel pretty shit on the way to a medical cos I know what to expect, if you compare it to the last question, like if you compare it to a fire or a person's trapped MVA, there's excitement cos I'm gonna play with tools and I'm gonna put my training into action and with the purple, you just know you're gonna feel shit afterwards. (VFR_M)

Challenges dealing with people and families

The role of the firefighters attending a medical event was viewed by many as being different than for a fire because it involved dealing with people, usually family members who were often upset and

distressed. A number of firefighters reported the impact of attending such events evoked significant negative stress for them. Avoiding family members as much as possible, for example by doing CPR, was identified by some firefighters as preferable.

But like we find it easier doing CPR or whatever, but when you got to deal with the whānau that's, yeah that's a challenge. (VVCR_M)

... this is delicate stuff where you've got family members, and yeah it's very hard not to grieve with them when someone's died in front of them, and you can't bring them back, when you go to those sorts of things people look at you and they think it's all going to be okay, because 'here come the firefighters and here's the ambulance', and you know, 'thank god, they'll bring them back to life and it will all be okay' and ninety percent of the time we can't do that, and you feel like you're letting people down, and yeah it takes a toll on you, but you just have to move on ... (CA_F)

I think what creates the sort of connection, so I'm part Māori so anytime there's a Māori family involved, I struggle a bit, I feel a little bit more emotional about the situation ... I would assume ninety percent of the guys are happy doing the chest compressions and the CPR, in a quiet room where nobody is around, but that's not the case, it's the screaming family and the family that are there, that is the hardest part. (CA_M)

One participant pointed out a key factor for firefighters attending medical calls was they usually took place in someone's home.

... they're either in the lounge, in the hallway and very often in the bedroom, so these most sort of intimate places of a home, that's where we do the work, and doing the type of medical calls that we do, it's very tactile so, it's not like squirting water at an inanimate building, or working with paramedics extricating somebody from a motor vehicle accident, it's tactile and more than that, we have to, you know we have to undress people, to do the job so we never do CPR on clad people, so it's very intimate in that sense as well, so you've got to take peoples' top clothes off and, it's just what it is, that's the only way you can do it properly, so you can understand it's a huge contrast as I said with tackling a fire, there's just no comparison. (KI)

'What is seen, stays seen'

A key negative impact reported by firefighters was the stress of not being able to cope with what they had seen. Some firefighters spoke about being careful to focus their vision and not look at things they could not un-see. Senior officers also talked about protecting their crew from seeing things they felt they did not need to see.

I've always had a policy where if I don't have to see it then I don't want to see it, so if there's a body inside the vehicle, if I can do my job away from the vehicle then there's no need for me to go and have a look, yeah so I mean the curiosity side of the job is long gone. (CA_M)

... one thing I was taught right near the beginning with, with a really wise paramedic, he said to me, you cannot un-see things ... so he said, you don't have to go looking, you don't, and I have always said that to our new recruits in the fire you know, I have always

said to them if you don't need to look don't, don't, don't go there you know, like if it is a, you know, fatal car accident and you don't have to deal with the person that's deceased don't even go there ... because you can't un-see things, so the more stuff that you get in your head, you know, in those odd you know dark times when maybe those, yeah you can't sleep and it is 2am in the morning and things go around in your head a little bit you know, those things can come back ... (VFR_F)

A number of firefighters spoke of how the memory of incidents stayed with them, often for years – this included firefighters who were retired and no longer in active service. One key informant talked about a retired firefighters' group who had recently started meeting and recalling traumatic events from years ago, and how talking about those events was therapeutic for them.

... they meet on a two-monthly, three-monthly basis and they only started this year and one of the major things that the two or three people who started this group up is that the older firefighters who have been away from the job for 20 years, they all still talk about the major incidents where there's been death or major injury or trauma. So it's become quite interesting to me as well, because these people seem to feel, they even said to me they feel better now that they have been able to come back and talk about it after all those years. (KI)

Similarly, some firefighters spoke of certain incidents that stayed in their minds and replayed over time. These incidents differed across various non-fire roles.

... yeah particularly if it's a fatal, yeah it will stay with me for quite a while, and I mean even a CPR where it's an old person, you know it's still you know someone's loved people and all of that, and if it's you know, a younger person it's so sad and so helpless yeah, I don't know, it is rough, and it's just sort of being at that raw nerve ... you know we had a baby die a couple of years ago in a car accident, that was really rough, I mean just talking about them kind of brings it up for me too you know. (VCR_F)

I have certainly had probably several calls where it stuck in my mind, for longer than I would like, you know, replayed in my mind or the images you know, have sort of popped up, quite a lot for a while, and generally that will resolve within a few weeks for me, but a couple of the more nasty ones where it does replay over in your mind a lot, like the hanging I went to, you know it was a young man and it was such a spooky unpleasant image, to see almost didn't seem real. (VCR_F)

Non-medical calls also can negatively impact firefighters

In addition to the challenges faced when attending medical and other non-fire calls, a couple of firefighters noted it was not easy to make direct links between these and their impacts on firefighters. In this regard other roles in firefighting were also seen to have negative emotional and psychological impacts.

I think there's a very close relationship between everything that we're doing, so, to actually divide the fire away from the non-fire, it sometimes might not be the right thing to do. (CA_M)

So, some of the stuff that has affected me from a traumatic point of view has been fire related but you're not interested in that but there has been a number of fires over the years that I've attended where we've had unsuccessful rescues that plays upon you emotionally, psychologically, it plays upon you quite a lot, but I'll push that aside for the moment and just kind of focus on the non-fire. (CA_M)

For several participants a key factor was the increasing number of medical/non-fire incidents.

The whole variety of dreadful traumatic incidents that firefighters go to on a far more regular basis now, what effect that has, so if you're coping, barely coping and something else happens, that may well be the trigger to why you actually choose to do what you do, but I guess that's a long-handed answer, but I reckon that their role clearly plays a part, but I don't know, two of them I've talked to their friends, and I know that they were uncomfortable around some of the incidents they've been to as firefighters, but I think that would apply to all of us. (KI)

Negative stress is cumulative

Negative stress was identified by many participants as being cumulative and ongoing.

I think the biggest impact it's a cumulative effect in terms of, you know, the stress and anxiety levels are getting filled up with every incident, and potentially, the types of calls they're going to are all very difficult jobs, so I think the affects, the question is, what affects are they having on staff? (KI)

And, of course, you know, places like South Auckland, they are getting really hammered with them, so, you know, that's cumulative. (KI)

One firefighter described negative stress as being something that is continually building up and he used the analogy of rocks in a jar. He gave an example of going to a suicide with four firefighters in the truck.

I don't like letting the guys see stuff they don't need to see, the girl had been dead for quite some time and the cops and the ambo had pulled the pin on it quite quickly, they said, 'no she's been gone for a while' but, just you know, seeing a young female you know, and then you go home, and you start thinking about it, you're thinking about why did she do it? You know, could we have done anything or if we had got to it, what would we have done, you know? So, all these things I think this is from the earlier critical incidents jobs I've been involved in, you know, you've got a jar and you're putting all these little rocks into this and one day you could tip yourself over. (CA_M)

He said each fatal incident was rated on a scale of 1 to 10, with 10 being the highest level of stress. The death of a child was the most stressful for the firefighters, rating a 10 and represented by a large rock. He explained the size of the rock depended on the family member the firefighter was relating the death to – for example, the firefighter might be thinking of their own child or grandchild. His thinking was that firefighters who were exposed to a lot of fatalities, accumulated stress, and particularly if they were exposed to child and young people’s fatalities. He also spoke of the need to record firefighters’ exposure to high levels of stress because it is cumulative.

Old people, if someone is 86 years old and has a good life, you know, and they die there’s no remorse there ... however if they’re a 49 year old just dropped down one day, and they’ve still got plenty of life left in them or if they’re a child ... it’s the size of the rock ... the jar’s gonna fill up a lot quicker with the big rocks, so, children really do it for most of us, you know, especially the parents, when you go to a fatal involving a child, you’ve got your own children, you make comparisons, relationships between your children or the age of your children or your grandchildren, you know, all those things, the rock gets bigger with those types of things, females for some reason, the young folk. (CA_M)

Related to this was how the cumulative aspect of stress affects people differently and that in part a person’s individual characteristics will determine the affect stress has on them.

... the old anecdote of the straw that broke the camel’s back is true, and you just never can really tell when that is going to happen, but the other thing that is just as important is we are not all wired the same so our strengths and our genetics, make up, who we are, how we react and how we deal with things, and for some, you and I might be at the same incident, you and I might have been brothers and come up the same way for 40 years, and then I might break down or crack up or whatever and you might not, I think it’s because we are all built different, so that’s what I mean by, that’s resilience, so you said why some and not others? I think that genetics has quite a bit to do with it. (KI)

Medical incidents, suicides and motor vehicle incidents can trigger negative reactions

Firefighters reported non-fire incidents can trigger strong emotional reactions or empathy when they have family members or close friends the same age as those involved in the incident.

For many of the firefighters suicides were hard to deal with for various reasons.

I think the various kinds of heart-related incidents, heart attacks and sometimes suicide type calls that we go to, they can be very stressful particularly the physical suicides are pretty hard to deal with sometimes, also probably for some more than others, I had one particular kind of suicide which resonates for me a bit harder because, and that’s hangings, because I’ve had an attempted hanging in my family and so that, I don’t find that I have to step away, but it does lift my anxiety level or my level or alertness goes up considerably when I am at those sort of incidents, and we have had quite a number of those on my watch over the last three years. (CA_M)

Some firefighters found suicides difficult because they perceived the person to have made a choice of death over life, while others felt the person had no other option. Firefighters expressed becoming emotionally involved if their children or family members had similar characteristics to those involved in a motor vehicle accident.

... there are some that I go to where I do find things a bit hard, like if it's, there's young kids around, I've had a couple that I can think of where there's been eight year old kids, ten old, early teenage kids around and it's their parents, I find that quite hard, just because it just makes it a lot more real, like you see the kids, and I suppose, especially since I got two little kids, so it's a bit more relevant now as well. (CA_M)

... and it might even be just you know, you've gone to a vehicle crash, and it is fatal, you can't really get a good look at the victim at the time, but it will be blonde hair or you know, same sort of car or things like that, of their kids and stuff like that, and that straightaway sort of knocks guys back. (CA_M).

One firefighter attended a motor vehicle accident that involved young people and resulted in a death. She explained how that accident affected the whole crew and they all supported one another through it.

Parents who were looking at these kids and thinking, 'oh my gosh, it could have been one of my children' and then the younger people at the station as well thinking, 'I'm not much older than these people' it was just seeing that dynamic was difficult, trying to help the crew through that ... (VCR_F)

Several firefighters spoke about the lack of closure for them because often they did not know the outcome for the person they had attended and with whom they felt a connection. One firefighter gave an example of an incident where the team was doing CPR on a person who had been shot. She thought it was an accident and put it out of her mind, then learned a few months later it had been a suicide.

... it sort of came back to me quite a bit, because you never really, often times you never get the resolution of you know, what the last outcome was ... the majority of the time we never find out, that I find hard. (VCR_F)

Attending incidents when the person is known has varied impacts

Most of the firefighters had not attended incidents where they knew the person involved, however several had. They described this experience either in terms of 'business as usual' at the time of the incident, or they highlighted the difficulties. Those from small communities reported being more likely to know the people they were attending and in rural Māori communities they could be whānau members.

One firefighter from a small community said at her local volunteer station they knew eighty percent of the people they attended. She had done CPR on many people she knew.

At the time I'm fine, I just do what I need to do, afterwards, you know, you talk about it amongst your crew, we always have a debrief if we've gone something where the person hasn't made it but, yeah, yeah, I'm normally absolutely fine at the time. (CA_F)

However, when she was called out on two occasions where her son was involved in accidents she described herself as appearing fine on the outside but being terrified on the inside and just wanting to throw up.

... I've been to my son when he had a rugby accident and his coach rung me and he'd fractured C5 and C6 in his neck and actually deep down I was petrified but on the outer, I was fine, you know? I also went to XX Fire Brigade which is our neighbouring brigade when my son rolled his car and landed on the rocks and yeah, when I got there I was okay on the outside, like I said but on the inside, I was yeah at the stage where you just wanna throw up. (CA_F)

Another firefighter attended his grandmother after a significant medical event.

She didn't pass away at that stage but she was pretty pretty crook ... yeah it was a bit challenging but I had a good crew and they knew obviously it was my grandmother and they didn't expect me to do the job so to speak, they sort of were happy if I just stood back and did nothing, so they were good. (CA_M)

The nature of medical calls was noted as important in determining their effect on the firefighter. Routine calls were often regarded as not having much impact, while more serious calls might have more negative impact.

Depends on the situation, basic run of the mill stuff is no big deal, you know, but I've been to a number of fatalities over the years that's involved people that I knew so, more than I probably care to imagine, makes it a bit harder. (VVCR_M)

Awful, awful, I mean yeah, come from a small town so it's inevitable but, yeah, nothing can really prepare you for it. (VFR_F)

However for another firefighter, actually knowing the person and the family involved sometimes meant he was the person who conveyed the sad news and this was positively acknowledged by the families.

It hasn't bothered me so far, and in fact a couple of times the person has died, I've said to the ambulance and police, 'look I know them ... it would be better to hear from me' that the loved one's deceased, and interestingly enough afterwards they've commented and thanked me for that, and said it was easier to hear from someone they'd known for a long time, and who knew the deceased, rather than a policeman or an ambulance officer or someone like that. (VFR_M)

Several firefighters discussed how calls involving people they knew were jobs that they needed to do and that at the time they needed to put aside personal feelings. After attending an incident, one of the difficulties reported was that the outcomes of medical calls often remain unknown. However, for some firefighters with personal relationships the outcome may become known.

Yeah, there's a job to do and I think you just get 'there's a job to do' in your head and you do what you need to do but afterwards there's probably a lot more processing that goes on through that, I think when we go to calls now, if you don't know the person, like for the next few days you wonder how they are getting on ... when it's someone you know, that slips to, I wonder how their kids are coping with this, there's a lot more personally,

you're aware of their situation and how it will probably be affecting their situation, so it weighs a lot heavier on you ... But, then there's the flipside of that in knowing that, you know the incident that I went to I knew the people well enough to be able to ring and say, how's everything going. Like a day in. So, you know in a way it was kinda nice ... he got to hospital and you know they managed to keep him going and he's in ICU, but things are gonna be okay. To be able to get that is quite nice feedback as well cos we don't often get that. (VFR_F)

One firefighter, as a father of a young family from a small community, spoke about the anxiety he would experience when called to a medical at an address he knew, especially if there was a young person involved. Another small town firefighter spoke of losing two good friends.

Nah, it's real sad, especially when it's family, friends, you know everybody in town, and that's the scary thing with us ... I could cope with motor vehicle accidents, house fires, things like that, these were people I didn't know, that's what I'm putting it down to, but since we're of that age, we're at the age of cardiac arrest, stroke, whatever, a lot of my friends and relations are all at that age, and I'm thinking, a couple more of these mate I'm gone, and, it's taken us a while to get over those two best mates, we lost them. (VVCR_M)

Another firefighter spoke of feeling helpless at two incidents where he knew the people.

... you know it's not your fault, you know you didn't cause this ... but when it's someone you know, I just find you feel helpless ... you start thinking about all the kids who that boy went to school with, you know, he's not coming back after the holidays, then you put yourself in the parents' shoes, you know, what am I going to say to him next week when I see him at the shop, you know? Someone you usually say, 'hello' and have a quick chat ... (VCR_M)

Impacts on personal life and family relationships are often negative

Some of the negative impacts cited by firefighters included being down or moody. They could not always make any connection for feeling that way, and felt it may or may not be related to their firefighting role.

Seeing the guys at work that can't quite cope with it and you can see that their safe place is at work and you wonder what is happening at home, I know a couple of guys have opened up and said well at home, they get really grumpy because it is safe to be grumpy at home, being at work you have to put that wall up to say everything is okay because you don't want your peers knowing that you are not doing so well, so I guess that is one barrier we have to break down, with our particular crew we talk a lot, so we are a mature crew I think, there is no testosterone involved I guess you could call it, we don't have to prove that we are okay, or put up walls, if we are not okay, we just say we are not okay. (CA_M)

Firefighters shared about their efforts to avoid taking work stress home with them; however this was regarded as inevitable.

... inevitably you do take some of the stuff home, yeah and I guess if you've had a really stressful day, sometimes it's hard to just completely you know, recommission on the drive home, but I don't necessarily, for me personally it's not a big, a big concern but I guess you know stress, is not good and essentially we're exposed to a lot of it in this organisation. (CA_F)

One firefighter reported how debriefings with crew were supportive and he knew about the services available through the fire service. He also could debrief with his wife. He thought he had become desensitised over the years, but when he had a difficult set of shifts involving fatalities he felt emotionally drained and was short-tempered at home – this was difficult for his children.

I joined the fire service, for a lot of years I didn't have a lot of stress, and I don't think it's very, it's not overly stressful what we do, I mean it has increased with our medical calls, but dealing with it here we often debrief within a crew, so we'll go back and have a talk about it, we go and have a coffee paid for by Fire and Emergency New Zealand, if there has been a death involved and we need to sort of go somewhere to debrief, so we can do that at a cafe, or pick up takeaway coffees and head back to the station, so we've got the crew that, that's generally the first instance who we would turn to, if need be then I've got my wife at home I can talk to ... (CA_M)

Another firefighter reported he tried to take the positive things from work home, but sometimes found this difficult.

I try and take the positive things home but, yeah, you can see how it could especially if you've had your last twenty jobs and everyone's died, cos, we always say, 'oh, yeah, killed someone today' even though we didn't kill them, they were dead when we got there ... we just didn't get them back ... but, yeah, it's a bit of black humour ... which works and helps but, yeah, I don't think I take it home, but my missus does tell me I'm grumpy some days, I don't really directly attribute it to work though. (CA_M)

One firefighter's partner was also in the fire service and she explained they had to sometimes ban discussions about the brigade at home or they could never get away from it. But she pointed out having her partner in the brigade was also a bonus because he understood what she was talking about.

... the positive is if you have a really good outcome like that man came and thanked me at work the other day for helping him and went around every single person in town that was on the crew that went and said, 'thank you very much for coming to help me' that's a real positive ... but, I guess, negative on your personal life, sometimes it can wear you down and of course your family are the first ones if you're feeling a bit stressed, they're the first ones that kind of wear it, aren't they? (VVCR_F)

Another firefighter recalled how at one stage medical events affected her so much she would go home and cry. Her children became upset because they thought they had done something that caused her to cry. She accessed support through Fire and Emergency and this helped her to work through it.

I'm not like that anymore but it affects your marriage because sometimes you come home and the things you've seen, you don't particularly want to talk about, sometimes it is really good because my husband's great so you know, he'll listen to anything, but sometimes ... it's very hard to explain to someone who doesn't do the same sort of role as you ... and I probably talk more to the people I work with, the team that I work with ... and it doesn't happen often, but on occasion that has upset my husband thinking that I can't talk to him, and that I can talk to the guys that I work with. (CA_F)

Now she is more cautious when responding to medical calls.

I am a little bit slower getting in that door because I have to prepare myself before I get in there, so it takes me a couple of seconds to say, 'right, you need to keep busy, you need to do this' and that's probably made me think a little bit more about what I do. (CA_F)

Negative impacts observed in colleagues

As well as identifying the negative impacts on themselves, several participants described their observations of colleagues who had been impacted by traumatic events. This was often couched in terms of 'watching out for mates'.

I've had to watch my colleagues very closely because, you know it's very hard for us, and there's a wide range of individuals' responses to every event that we go to, the majority of people are able to deal with it, but not everyone, not everyone. (CA_M)

I had experience with some people who have just had a cumulative, one fatal incident after another which has built up on them, so, there's that and they're usually compounded by something happening in their personal life as well. (KI)

A few participants noted the recent suicides among firefighters. In these discussions they seemed to take care not to make causal links between the suicides and the challenges posed by the firefighting role; they typically postulated firefighting may have contributed to these suicides.

... but I couldn't attribute any of the suicides that I know to the firefighter role necessarily, on the other hand I would say that we've got a failure completely to understand the real impact of what you're actually seeking information on, or addressing with your survey, in that we don't know how, the whole variety of dreadful traumatic incidents that firefighters go to on a far more regular basis now, what effect that has so if you're coping, barely coping and something else happens, that may well be the trigger to why you actually choose to do what you do, but I guess that's a long-handed answer but I reckon that their role clearly plays a part, but I don't know, two of them ... I know that they were uncomfortable around some of the incidents they've been to as firefighters, but I think that would apply to all of us. (KI)

There are a raft of factors that affect someone's decision to take their life and you never know what was going on inside that guy's head, maybe there were four other things in his life that were making him think that way but it was definitely known by his mates that he was not coping with medical. (CA_M)

3.4 Preparation of firefighters

Summary

Firefighters generally equated preparation for firefighting with the training they had received for their respective functions. There were mixed views among firefighters with regard to training for non-fire and medical roles. Many career and volunteer firefighters (co-responders) reported being well trained for their role, albeit to a specific (limited) scope. First aid training for these firefighters was described as fundamental or at a base level. A contrary view was strongly expressed by other career and volunteer co-responder firefighters indicating they were not well prepared for these roles and with more training they could be more effective. Volunteer first responder firefighters typically reported they felt well prepared by the training they had received. New recruits were generally thought of as being well aware of the shift in focus from firefighting to non-fire responsibilities and so were thought of as prepared for the scope of their firefighting roles. For some participants the rapid introduction of the co-response responsibilities contributed to a sense of being unprepared. Many participants identified a number of training and preparation gaps including: working with Māori and a range of ethnicities and cultures; managing psychological wellbeing; reframing success; and improving training quality. Several firefighters raised the idea that all firefighters (across the board) need more medical training. The importance of having well prepared teams was also noted as allowing for the strengths of individuals to be acknowledged and for individuals within that team to be supported in their work.

Key results

Many firefighters feel well trained

Many career and volunteer co-responder firefighters reported they felt well trained and prepared for the non-fire aspects of their role, including medical calls. The training received was also regarded as being of high quality.

I think it's [training] it's pretty good actually, I do think Fire and Emergency train us really well. (VCR_F)

Yeah, also I think personally that we do, we get enough training in that area, a lot of people disagree, but it's, actually it's pretty basic stuff fundamentally, you know the heart's a pump and if you keep it going, you keep airways open then that's all we can do until ambulance come and do their fancy stuff with their medication, and gadgets and devices and all the rest of it, so I'm actually quite comfortable with the level of training, and being equipped. (CA_M)

I think there's a perception that they're not [prepared for medical call outs] but in reality they are, if you talk to St John they are full of praise for the skills that our firefighters have. [KI]

Some respondents reported a direct link between being well trained and having confidence to perform the medical aspects of their role.

Oh we're pretty well prepared, you know everyone's pretty confident in what you do and how you go about it and how you act and so you know, you pick up on those sort of things like if, yeah I guess, don't know how to put it really, everyone's pretty well prepared, we've done the training and you do them every now and then and you just yeah, get on with it really. (VCR_M)

Many first responders reported the quality of their training prepared them well for their medical roles.

In terms of training no, I don't think we can be better prepared. (VFR_M)

Among all groups of firefighters, 'learning on the job' was regarded as important to build on the skills learned in training. Both training and experience gained through attending calls were regarded by several firefighters as necessary to being well prepared for their medical role.

... the training that we get is ongoing and we actually, the amount that you actually learn while you're at an incident is probably the most beneficial because things, practices change or get updated as the medical profession decides, 'oh no, we're going to do it like this now' or stuff like that so, or the way they incubate people and done differently so yeah, sort of that on the job training is probably the most beneficial, we do do recertification stuff with St John over the course of a day and I think that's every two years where it's more formal so you're in a classroom and you practice on sort of resuscitation dummies and that sort of stuff but the on the job stuff is the most beneficial. [CA_M]

Yes so since I've gone to probably 300 or so medical calls since becoming a first responder, it's quite, it's not so much training it's more experience now for me, so I'll be, I just sort of know what I'm doing around the training, and based on my training and going to all these medicals, I know what I have to do for each sort of situation that I'm going to. (VFR_M)

Training viewed as being within a specific (limited) scope

Many career and volunteer firefighters (co-responders) expressed a view the training they received was focused on a very limited scope of skills. In particular, they reported being well trained in CPR and very confident in doing that work.

CPR is absolutely a piece of piss, it's nothing, it means nothing to us, you go in there and do a resus set up. (CA_M)

... just deal with the basic first aid stuff is fine, I mean, we know what to do, it gets done. (VCR_M)

We do a lot of training and at the end of the day we respond to purple life-threatening calls so we're there to really do CPR and to resuscitate and to try and revive people, so, turning up to these scenes we generally know we're going to be doing the ground work, CPR and setting up defibrillators and we can do that, we're trained to do that, we've got the gear to do that, anything more technical than that, we're not that confident with ... if

they're non-responsive and not breathing then we're into our work and we give it our all to try and get a positive outcome and in that regard I feel pretty confident in my training and skill set that I can do that role pretty confidently. (CA_M)

The scope of the training for career and volunteer firefighters (co-responders) was generally perceived as being at a fundamental or base level. It was reported this level of training impacted on the confidence of some career and volunteer firefighters (co-responders) and limited the range of medical assistance they could provide.

But what I have heard amongst the troops there is nervousness because we only know the basics really, we are only realistically a step up from Joe Blow in the street and it's only a small step. (CA_M)

So, we can deal with cuts and breaks and cardiac events to an extent but, you know we've got a defibrillator, so we can use that, as far as people that have bad injuries in a car crash well there's only so much we can do until the ambulance arrives, you know? (VCR_M)

I mean we'd always been trained in resus and defibrillation use, so we had those skills even if we hadn't used them much, but then suddenly we would be responding to one a week or so, you know, and you know they're never straightforward, so we were going in situations you know, we went into a lot of suicides, we went and still do go to a lot of suicides, you know there was a murder scene I know people went to, you know, really complicated you know, drug use, all sorts of stuff ... (CA_F)

It was acknowledged that first responder volunteer firefighters had received a wider scope of training and were better prepared for medical calls through having a greater range of skills to use. However, not all of these volunteer first responder firefighters felt sufficiently trained and prepared for the medical emergency response function.

I think the first responder move is a really good idea cos then they get a few extra tools in the toolbox. (CA_M)

We did first aid training, we went on a two-day course and we sometimes do some training on station, but I was never really told what to expect, it's just like here you are this is it, I can't actually explain that, no, it was like being shown a recipe but not having it explained to you, with no background ... it's just like this is what you do, how to explain it? I wasn't prepared, no, I knew what to do mechanically but I wasn't prepared for it. (VFR_M)

... they've now brought out an excellent training book for first response brigades, that's helped immensely ... (VFR_M)

A view shared by several firefighters was that it is not possible to be trained for everything. There was also some recognition other firefighters might hold a different view and would prefer more training.

For me personally I feel that the, the two full day first aid course I did was great, and the refreshers are always great ... I think there's really nothing that can replace experience, just getting out there and having to just do it, because every single situation is different,

you never really know quite what you're going to see, there's always something that's a little bit different, and you can never really 100% prepare for anything, even with fires you know there's always something that's a little bit different, and you've got to run with it, figure something out on the spot, I don't know if other people would feel the same way, I feel like other people may have wanted more, more preparation, and some people definitely would probably just rather not do it at all, I felt fine about what training I had and knew that I had to just learn it on the job really. (VCR_F)

You never know what you are going to see, that's the problem so how do you prepare for it? I guess that for me personally I just get on with the job and I worry about it later, I deal with what I have to deal with and then I don't think about it until I have moved away from the scene, I have dealt with enough traumatic things, not very pretty things to know that at the time just get in and do your job and later on allow yourself to feel what you are going to feel, can you prepare for it? I don't know, I don't know, maybe the nutrition and exercise helps you prepare for it because if you are psychologically well before you go in then you are better prepared to deal with it later. (CA_M)

Some firefighters feel inadequately prepared

Other career and volunteer firefighters (co-responders) presented a view they were not adequately prepared for their medical roles.⁴ It was identified by some of these firefighters they do the best they can with the skills they have; but they want more training and preparation so they can do more when responding to medical calls.

I'm going to all this stuff, and I've just been trained to the same level as a McDonalds worker who needs a first aid certificate. (CA_M)

Yeah the training's there, we probably, to be fair we probably don't do enough of the first aid type training, where nine times out of ten when we turn up the ambulance is there, and we just do the donkey work, we do the compressions and the heavy lifting or whatever, so it's our, our expertise isn't required as such because the ambulance is running the show, but sometimes when we turn up and they're not there, you may not have done, you may not have had your first aid training or you know for a long time, and or been to a CPR in four, five months, yeah your training comes back to you but, because we are going to more and more of those medical calls, I would like to feel a little bit more confident going into those situations, knowing that you know, what I'm doing is the right thing, we all know how to do CPR etc. and those sorts of things, but sometimes when you're dealing with children, it's a little bit different and I'd like to see, I would have thought, well I think that more training in those areas would be good ... (CA_F)

⁴ Career recruits do a four day first aid course as part of initial training and then one day of first aid training every two years. Volunteer firefighters do a two-day first aid course and a one day refresher every two years. This training is delivered by St John and is focused on practical skills. First responders are trained to St Johns first responder level which involves a four day course; eight hours continuing clinical education is required every six months.

Training for medical calls was seen by some as being an additional responsibility. It was viewed as important to ensure training for fire responsibilities was maintained, but there should be scope to enhance medical training, particularly as some medical calls could be challenging and difficult to cope with.

I think I was pretty well [trained/prepared], no hang on, some of the yucky stuff you can't really be prepared for, until you experience but as far as, CPRs and things like that, I think I was pretty well prepared considering ... I think as far as recruits, they kind of touch on medical stuff, and I think they need to do more, you know, I know that we need to learn our firemanship because that's our bread and butter, but I do think that they need to, and I have said this to my crewmates, I'm like, you know, the amount of, sorry for lack of better words other shit that we deal with, why are not taught, why is it not taught more than a week, not even that really more than a couple of days at NTC, I think there needs to be more training around that, because yeah nothing can really prepare you for it ...
(CA_F)

For some firefighters, the medical calls appeared to be accepted as an extension of their helping orientation. A view expressed was firefighters will do their best with the skills they have, suggesting they could perhaps be more useful if they had more skills.

I think everybody as a group acknowledges that we're just doing our best with very little equipment, and very little training and knowledge, and we just have to stick together and just do our best, and that whatever we do is better than nothing, and that we, you know, the calls we get called to for cardiac arrest or things tend to be ones that are not going to have a good outcome, and so whatever you do, you know, that you're doing, you're doing something so people don't tend to be critical about that sort of stuff.
(VCR_F)

I do feel especially as a volunteer point of view, that we are undertrained to attend the emergencies, and that can be quite stressful on us in the situation, when you're not really sure what to do, and us being quite far away we have problems with getting ambulances to the scene quite quickly, so we're under a lot of stress and pressure ourselves, to try and do the best for patients care with little training that we do have. (VCR_F)

Several firefighters reported they felt out of their depth through not having the necessary skills, knowledge and/or confidence to respond to the medical situations with which they were faced. It was reiterated that their desire to assist meant they 'did the best they could' with the skills and knowledge they had.

I knew what to do mechanically but I wasn't prepared for it. (VFR_M)

Where you have got to go through the door, it is hard all along or whatever the hell what you want to call it, it is above that and we are not really to that level and are caught in a position where you are out of your depth, not so much faking it but just trying to do your best with what you can, you know, you are out of your depth really, but I guess that is the very nature of emergency services too, you just deal with what you have got as much as you can and just because the ambo turns up, they may not be able to do a lot or may be inexperienced as well. (CA_M)

Although some participants shared concerns about the sudden introduction of additional medical responsibilities, there were few accounts of firefighters not responding to the challenges of the new role. A couple of firefighters commented on resistance by colleagues who refused to attend medical calls.

I don't know if it's an attitudinal thing, the majority of members in my brigade joined just to put out fires, not to do CPR, and they will refuse to go in the truck for medical calls. (VCR_M).

A few volunteer firefighters also reported seeking out alternative ways to address what they perceived as unmet training needs. One first responder noted that training had improved with the release of a first responder training manual. Prior to this he was finding information elsewhere and using these resources as training within his brigade. Others reported accessing information in books or online sources.

... I was subscribing to US medical and ambulance and fire service magazines, because you see in the US most fire departments are also the ambulance service provider, clipping articles out and taking them up for training to discuss, because we couldn't get training from anywhere else, so it has improved, but it has been very, very difficult you know, getting it. (VFR_M)

A lot of volunteers will do a bit of studying outside of the fire service, so like I have a few books that I read that I've bought online, that sort of go through some first aid things, a little bit more in-depth than what perhaps we get taught through the fire service, because we get sent to calls where we don't have enough training through the fire service to know what to do, for the period of time that we are there before qualified paramedics are on the scene. (VCR_F)

I'll go on-line and see if I can find something else to upskill myself or, if I can talk to someone else who's better than me at that sort of stuff or someone who's been a nurse or someone who's been in the medical industry, just to get some tips from people that you know, that have those skills, I guess that could be seen as a positive that you kind of force yourself but then, you shouldn't have to force yourself, I mean they should be training you to a standard that you're comfortable at these things ... (CA_M).

Preparation/training gaps for medical response role

Training gaps were identified by many firefighters as contributing negatively to performance in their medical response role. Many of these gaps related to 'soft skills', rather than technical medical skills.

Dealing with families

Many firefighters noted that dealing with families and relatives while attending incidents, many of whom were highly distressed, was a challenge they did not feel well prepared for. On occasions, firefighters reported some environments they worked in as hostile and they felt their physical safety was threatened.

They [firefighters] get sometimes angry, hostile or very distressed relative, and apparently that is some of the difficulty that they have, and you know how to handle that, and you know they're there for a longer period of time. (KI)

The other morning there was a forty five year old female who was in perfect health and just passed away in her sleep, she had a heart attack in her sleep, what do you do? What do you say to that when the seven year old son and the five year old son are in the lounge room balling their eyes out? You are never prepared to confront any of that. (VCR_F)

I don't think we need anymore medical support training, what we do need is how to deal with those things around the situation we're presented with, dealing with families, friends, violence, you know, I don't know what the answer is but we need someone to help us to be able to deal with those things better, we don't even have any tools for those. (CA_M)

I know we got to a young girl about twelve, thirteen or something hanging a while back, and we were there before the ambulance and I sort of went in there, and fortunately the mother had cut the girl down but she was just you know, just screaming her head off, I've got to deal with the girl but you know, without kind of being nasty and rude to the mum because it's her little baby daughter kind of thing, have to deal with her as well sort of thing, yeah we're not kind of trained for that if you know what I mean. (CA_M)

Working with Māori and a range of ethnicities and cultures

Another training and preparation gap identified was lack of appropriate and respectful care and practice given to people across a range of ethnicities and cultures. There was a particular gap in respect to working with Māori.

There was concern about the need for a process or protocol where a person has died to show respect for that person and their whānau while also supporting the wellbeing of the firefighters attending the incident.

I guess one of the other things that's emerged from our forums is from a Māori perspective, quite a few of our Māori women have said that we needed more of cultural approach around deaths as well and I think that's spiritual wellbeing, and that's emerged maybe three or four times separately ... we don't do that very well and I can sort of see that having some of that it's more of a risk for mindful approach to how you deal with death even just on the incident ground ... sometimes ritual and those sorts of things in and around things like death actually are part of helping cope and so I could see for Pākehā or non-Māori people in and around having that different approach to how we deal with death. (KI)

One volunteer firefighter (co-responder) spoke about when he first joined the fire service and there was a fatality; peer support and debriefs were not done but the use of karakia helped.

I think the best thing the fire service did for us was actually bring in a iwi liaison officer Māori thing, and what they did was they blessed everybody at the fire, at the scene, all the rescuers, the family everybody, before the body was rolled into the back of the hearse and taken away, and that was really uplifting for us. (VCR_M)

Another participant mentioned a lack of preparation in dealing with Pacific people. He noted he had learnt appropriate skills and knowledge from attending incidents over many years and it would be a useful area to be addressed when training new recruits.

It would be quite useful for new recruits to be told 'hey these things are what you can come across' there's not the young, a child or younger person, but there's a cultural thing in it too, the way that different cultures react to that sort of thing, and when you are there, it can be quite upsetting, quite a lot of the Pacific Island people, they want to be in the room and rub the feet and rub their hands while you are doing things, it's a hassle, but we know that if we try and push them away, we are asking for trouble, and a lot of the young ones, I've only learnt that over the years because of attending quite a few and you get to know the different cultures and the way they react to people and you let them do things and try and carry on. (KI)

Managing psychological wellbeing

Training for firefighters about how to look after their psychological wellbeing was also identified by two key informants who had experience as firefighters. The reasoning advanced was the provision of skills to address issues around stress and identify when seeking help and support would be appropriate.

They learn about psychological wellbeing and the effects of stress and what it means, that it's okay, you are gonna be affected by incidents, that's a normal reaction to these things, but how to sort of recognise what's normal and then what's gonna require assistance. (KI)

We had no, nothing around psychological care at all, and I'm saying, 'look that should be right up there' because even now like the new guys starting, their expectation, the name is firefighter, that they're going to be fighting fires, and the reality is it's only a very small part of what they do, they spend far more time especially in terms of potentially traumatic situations, responding to the code purple calls. (KI)

Opportunities at the recruit level to do more around psychological preparation and training were noted.

I think more needs to be done at recruit level, I think there's a potential to sort of start the psychological health journey, at recruit level so giving them the awareness, giving them the conversations, talk to individuals in that trade, how they cope with those type of incidents, I don't think our training really is realistic, currently to deal with those situations, I think it would be good to do some, give the officers a bit of a toolkit, to be able to you know how to have conversations, how to deal with, you know, relate to emotional people, a simple toolkit, I think that's what, I think that's the things right now that could be done. (KI)

Understanding what success 'looks like'

Training around 'understanding what success looks like for a medical co-response looks like' was also identified as a gap. A view that firefighters need support to develop a more realistic understanding of what successful practice looks like was expressed and recognises that firefighters typically attend comparatively more poorer outcome incidents than ambulance services, and as a consequence

firefighters have fewer success stories (patient survivals). A key to understanding success identified by participants was recognising and accepting purple calls are unlikely to have a positive (or successful) outcome in terms of lives saved.

These purple calls, and there's nothing else, it's just cardiac respiratory arrest, and for us [Fire and Emergency] we don't have a very good success rate of reviving them, so it's like every time we go to these somebody dies, but then when we talk to St John they say, 'well they're lucky they get the good news ones ...' (KI)

Yeah and when you get a success, that's a really cool feeling, so there are highs and lows in it and you have to know how to deal with both, grab the successes and understand the losses. (CA_M)

... even now and then we get it [firefighting] wrong, the reality is nobody knows, because everybody thinks well, that fire's out, you done a good job, you might have been able to put that fire out and save half the house if you'd done it properly, I'm not saying that happens a lot, my point is that nobody knows, only we know, whereas with, they feel they consistently fail because they go to CPR events where the likelihood is really small, that they're actually going to revive people ... (CA_M)

Reframing success meant success could be 'measured' in other ways such as performing duties well and bringing comfort to those at incidents. The need to remove the negative connotations for firefighters associated with medical calls was also identified.

Yeah I think the challenges are just, they are being regularly exposed to traumatic events, that generally have a poor outcome, I think firefighters' nature, being the rescuer, making the situation better for people, they see that potentially that the, this is the sort of, what I'm trying to turn the negative, the viewpoint as a negative you know, the person has a successful outcome, but I'm trying to turn that into a positive by saying, 'well, you're well trained, you're effectively bringing a level of comfort, you are making a difference in a positive way' so, but at the moment there's a negative connotation to responding to medical calls, and not having a successful outcome generally. (KI)

Improving training quality

Reports from a number of firefighters suggested better quality training is required. For some, training was not always regarded as meeting the needs of firefighters or providing new knowledge or skills development. In a few instances training quality was criticised as repetitive. More scenario-based training reflective of 'real-world' situations and 'relational skills' training was suggested as a way to improve training quality and to help firefighters feel more prepared. This was noted as one way to reduce reliance on learning on the job.

I mean the amount of first aid courses I've done over my career, and in previous employment is just, every time someone says you're doing a first aid course, I groan, it's tedious, it's what we call suck eggs training, so we know the stuff, why are we doing it? Sure yeah, we have to get certificated every couple of years to do it, but if we're talking about medical calls that we're going to, we need to be, a different level of training I think. (CA_M)

Well even some realistic training [would give better preparation], so ok, we go into a scenario, maybe St John's could have done it or we could have done it, and just have role players actually in a role, being family members who are grieving with us, and we're having to work amongst that, because that gives an opportunity to think of some strategies, you know, set your gear up, get someone starting compression, someone on the defib, the boss, the OIC could actually take the family members away into another room, have a chat to them and then come back and assist, so we actually learnt on the job, and there's nothing worse than turning up to an environment like that, and having to ad lib basically, so some realistic training scenarios before we were turfed out would have been invaluable I think. (CA_F)

... because we are going to more and more of those medical calls, I would like to feel a little bit more confident going into those situations, knowing that you know what I'm doing is the right thing, we all know how to do CPR etcetera and those sorts of things, but sometimes when you're dealing with children, it's a little bit different and I'd like to see, I would have thought, well I think that more training in those areas would be good, instead of just practicing on adult size dummies all the time type thing, it's adequate for what, you know, but I'd be confident having more training. (CA_F)

Possibility of advanced training for all firefighters

There was considerable discussion around the prospect or possibility of advanced medical training for a wider group of firefighters. Different models or options were mentioned, including all career and volunteer firefighters (co-responders) being trained to the first responder level, or at least having some advanced medically trained firefighters on each crew. Some participants viewed this move as inevitable in the long term.

I often wonder how far organisational wide, it is a whole other step, do we commit to another level and get more advanced? But from my understanding we are not paramedics or anything at this stage. (CA_M)

We've got five seats in every truck, well how about having a paramedic in this seat? Or having one of our guys on the crew at a higher medical trained, almost like a paramedic type level, and I believe that that will happen down the track, but that probably couldn't happen soon enough at the moment with the amount of calls that we go to. (CA_M)

I think a little bit more advanced training, and this is only a personal thing I think, that we should all be up to the first responder level, and carry the first responder kits with us, that have some lifesaving drugs in them. (VCR_M)

Some reservations were expressed about any moves towards additional medical training. There were warnings that this may (further) alienate those firefighters who are not supportive of medical responsibilities. One participant raised the concern that “even more stress” would arise with the increased expectation of providing more advanced medical responses.

I think eventually we'll amalgamate completely and be like in the States fire and ambulance ... that would be definitely good for some of us, I know a lot of the guys would probably leave if that happens, that's the only problem and it's the older guys that have got all the experience in the firefighting that didn't join up for the medical. (CA_M)

But my only thing with that is, if we train to the next level, do we get situations that are part of the next level? ... which causes even more stress. (CA_F)

New recruits aware of non-fire responsibilities

New recruits were generally seen as appropriately recruited and aware of the realities of non-fire functions. Some participants were unable to clearly identify specific training they had received but suggested there could be more emphasis on psychological wellbeing. The recruitment of people with a variety of skill sets was also seen as positive, recognising the range of responsibilities for modern day firefighters. In this respect they were seen as prepared for their role.

... you know for recruit training and things like that they are, they couple with those types of things you know there's more emphasis on psychological wellbeing, I believe, I haven't seen the programme they deliver to recruits but I think there's even more of an understanding for people joining now, they will be exposed to medical calls as part of their core business. (CA_M)

Well there's the recruitment of people with a wider variety of skill sets, and work is constantly, things are slowly getting better and better ... (KI)

Strengths of having the 'right team'

As well as discussing preparation and training for medical roles on an individual level, the importance of having well prepared teams was noted. Having a well prepared team allows for the strengths and individuals to be acknowledged and for individuals within that team to be supported in their work.

I mean we're lucky we've got four of us, at least on the fire trucks so people have their strengths and weaknesses, and hopefully there's always somebody that's more suited. (CA_M)

Probably not all that prepared, I mean obviously I've done all the courses and all the training but I think because we work as a team it's like a three or a foursome, I know that if stuff goes wrong it's not going to go really wrong because everyone's got your back. (VVFR_F)

3.5 Support for firefighters

Summary

Support for firefighters was discussed in terms of brigade support, which consisted of formal and informal processes and the ways in which firefighters utilised coping strategies outside of their brigade. Fire and Emergency was viewed as being committed to supporting firefighters wellbeing and a positive culture around help-seeking was identified as developing. Formal brigade support was related to debriefing, leadership, peer support and employee assistance programme (EAP) support. The quality of this formal support was discussed with mixed views. Some considered formal debriefing processes helpful while others preferred a more informal approach. Many spoke positively about the quality of leadership within their brigades, however some participants referred to 'old school' culture, practices and attitudes that hindered help-seeking. A few participants commented that changes needed to be made, but this would probably not happen until their leaders retired. Some participants

were unsure whether seeking help would be treated as confidential. The peer support system implemented by Fire and Emergency was considered by some participants to be helpful, but overall there were few comments relating to this more formalised peer support process. Participants who had accessed EAP had mixed views about the helpfulness of this counselling support. Most participants reported being aware of formal support services, as they were well promoted in their stations. With regard to informal support within their brigades, firefighters spoke positively about camaraderie. There was a culture of 'looking out for each other' and many spoke of the value of 'black humour' as an immediate coping mechanism during and after call-outs. Personal coping strategies adopted outside of the brigade were mainly described by participants as being able to talk to their families and friends. Other strategies involved physical activity, socialising, in particular with their crew members, keeping busy, spiritual support and blocking out incidents.

Key results

Fire and Emergency viewed as committed to supporting firefighter wellbeing

There was a view that in its current practice Fire and Emergency is committed to addressing firefighters' wellbeing. However, alongside this view was the perception Fire and Emergency's commitment and actions have been reactive as opposed to proactive. Some participants described Fire and Emergency as being in catch-up mode.

I think we as an organisation we are definitely playing catch up now, so we're almost you know, but I hope they play catch up fast you, I don't want to see if this guy, if it turns out the guy in [location] has committed suicide because of you know, some work place causal factor, we need to get on top of this real fast do you know what I mean? I don't think, we don't have the luxury of waiting another two years for something to change, because it's just, we can't afford to lose anyone you know, so for me it's, I guess, the organisation is going to be, how quickly we move on this, and do something decisive and positive, because you know you can't, it can't just be left up to chance from my point of view. (CA_M)

We have been over the last four years playing catch up, so while ideally we would have been in a proactive educational forming mode, a lot of what we've had to do is be quite reactive, literally the ambulance at the bottom of the cliff type of stuff, rather than a protective fence at the top, so we're increasingly, in all the work that we do in safety and health and wellbeing, trying to move the centre of gravity to proactive educational support, and hopefully less at the end of picking up the pieces, of people who can't cope with doing this type of work. (KI)

There was discussion that Fire and Emergency's commitment was not always matched by their actions. For example, the availability of professional support and the enhancement of good practice in brigades was perceived by some as hampered by 'cost control' measures.

... safety and wellbeing is a number one priority as long as it doesn't cost too much you know, or doesn't result in too many changes that the organisation perhaps aren't palatable, so I think we've got to sort of change that mind set from our managers, that you know, their safety and wellbeing is our number one priority, but as long as it's going

*to be cost neutral, because you know, even now I have a conversation with my manager.
(CA_M)*

*But the frustrating thing I find though is that the Fire Service talks this big game about
we support you and we have all these peer supports and all this and that and that sort of
stuff, and it's great ... (CA_M)*

Several firefighters raised the issue of management's distance from the realities of day-to-day firefighting stress. They suggested this could impinge on Fire and Emergency's commitment to enhancing the availability of wellbeing services and brigade level practices.

*... you know like say the chief fire officer turns up at a motor vehicle accident, well he is
or one of the commanders upstairs, the managers upstairs turn up to a motor vehicle
accident, they're actually not hands-on, they're actually quite aloof to the accident, so
they may stand back ten metres or so, they're not actually in there hands-on, dealing
with blood and guts and whatever else that's in there, they're actually standing back,
they'll take a look, oh yeah my boys are doing ok, yeah they're doing a good job and then
they'll go back and talk to the police, or to the officer so they're actually not hands-on
dealing with life and death, and looking life and death in the face ... (CA_M)*

The high level of commitment and recognition that firefighters want to do the best for their community was noted, and the ways this might inadvertently result in limited support for psychological wellbeing. In addition, the stresses of firefighting were viewed as not being the same across all crews and brigades and this needs to be recognised by management in their planning. In particular, Manly was identified as an area where heavy demands from medical calls resulted in increased levels of negative psychological stress associated with attending those calls. South Auckland was identified as an area with high levels of both fire and medical calls, also resulting in heavy demands on the firefighters.

*I don't think organisationally they understand the cost of what they've demanded of their
firefighters, I don't think they get it, and I think a lot of that's because in community
terms, firefighters are always going to want to go out and do the right thing in their
community, whether they're prepared or not, so if somebody says to you, would you,
you're now a medical responder as well, you're arguably trained to do the job itself
except not trained fully, are you going to say no? No I'm not going to that death down
the road that I might have made a difference because we would have got there sooner,
because I'm not psychologically prepared for this, you're never going to do that so I think
they're just sort of relying on the people who do a firefighting role, to show care and
concern in their communities, because that's what they do, so I think that's a little bit
tricky, the other thing is that endlessly now all correspondence that comes out, they keep
talking about support for people and we're deeply concerned about your psychological
wellbeing, but other than that paragraph nothing happens. (KI)*

A positive 'culture' change towards help-seeking is developing

While some 'old-school' attitudes still existed in some brigades, many participants (career and volunteer firefighters and key informants) expressed feelings of hopefulness that a culture change would occur, or was already occurring. Change was reported as being driven by both management and firefighters. Some participants shared how they were already noticing this change and attitudes

within their brigades were more supportive of open communication and help-seeking. Several commented this change would take time.

Many firefighters reported they were experiencing a gradual change from a culture where help-seeking was historically viewed as a weakness to a more open and supportive one.

Now in the organisation, and it has been like this for the last few years, is the formerly taboo topics of talking about feelings are no longer taboo, so talking about how you are feeling is more common place now in the firefighter environment, where it didn't use to be. (KI)

I think the attitudes have changed and, in some instances, it has changed because as the older guys retire and the new guys come in, the younger ones they are a little bit more open to assistance whereas sometimes the older guys that were retiring you know, they had just grinned and beared it for forty years. (CA_F)

I think things have moved significantly in the positive direction for the last three or four years, it really has started opening up people to understand the psychological effects of the work and you know, the whole stigma around macho man is dwindling from my point of view. (VFR_M)

We've had a big turnover, so a lot older crew have left and it's a different station, even in the last couple of years I've been there you know, it's changed a lot and I think with the older crew a lot of old school attitudes left, and I'm not being mean but you know, they talk different you know, harden up kind of things, whereas the younger guys like, I'm talking ages between 30 and 50, they have stepped up ... they're making it ok to talk about that stuff. (CA_F)

The view that change was being driven by firefighters rather than management was highlighted.

I mean there was no way that we would have had like some of the talks that we've had definitely five years and previous to that you wouldn't have opened your mouth to have those sort of talks because you were actually just looking for trouble, looking for people to attack you so I think there is change there, but that's a change that is actually driven by the firefighters on the floor, this has nothing to do with anything from management, this is just something that you know, we're doing for ourselves and because we had to and that's not good from an organisation perspective I wouldn't have thought. (CA_M)

A few firefighters suggested a lot of work is required to achieve an environment that is genuinely positive and where help-seeking is openly supported and encouraged. One firefighter identified some improvements in the encouragement of help-seeking but then suggested recent suicides were an indicator of something not being right within the organisation. She suggested there was scope to encourage more open discussions within the organisation.

It's improving ... we're all tough, we don't really want to talk about it, but it takes one person really or a group of people to start the movement and the barriers come down and I can see that happening, I really can and we've had a multitude of suicides within our organisation in the last two years so something's not right and the more we can openly talk about it and get these support networks set up then the better it's going to

be for everybody ... in the last eighteen months (help-seeking) has really been encouraged ... it's like gaining momentum. (CA_F)

Mixed awareness of formal sources of support

A few participants reported services were not as well advertised as they could be. One concern was that most of the access was via the Fire and Emergency intranet, and that services were not highly visible and required some searching to find details.

I feel like it [help seeking] is, it is definitely encouraged within our brigade, and I think the fire service do try and encourage it, but I mean I've been on the website today just previous to this interview, because I thought, I'm going to have a read of the things, initially found it quite hard to find what I was looking for on the website, there wasn't anything that came up like instantly on the homepage to say, 'hey look, this is the helpline' or anything like that, I had to actually go in depth to find that information initially, and once I found it, it was really helpful, yeah, other than that we don't have anything at our station, poster wise or leaflet, pamphlet wise, yeah, other than we've just got the, obviously the computer to search things. (VCR_F)

Several participants commented while they were aware of how to access formal sources of support such as counselling, this was not actively encouraged within their brigade. A number of firefighters and key informants identified multiple support services advertised within brigades.

We have available for every single employee and person whether they are employed or not in the organisation to ring up EAP services and talk as they need to and everyone gets about five sessions if they need it, there is the opportunity to go to the fire service doctors and psychologists now. (KI)

We have a multiple suite of tools that a person can access whether talking to the officer or talking to peer support and I will encourage them to if they want to and its anonymous, give them the oh eight hundred number, encourage them to go to the doctor, really just for me it's about removing the stigma on psychological health. (KI)

Formal peer support service is considered valuable

A more formal peer support service⁵ established by Fire and Emergency was viewed favourably by firefighters and key informants. It was also reported as being integral to the service and was well utilised.

I see peer support as a very integral part of the fire service, it's great, absolutely great thing, I see the peer support network as working extremely well you know, extremely well, they've got a great uptake and everything. (CA_M)

⁵ "Peer support is the provision of support, assistance and practical help from a person who shares similar experiences. It occurs when people draw on their own experiences to offer support to others. Within the NZFS, peer support provides an opportunity for personnel to talk confidentially about personal or professional issues with colleagues who have been trained to provide initial contact and support" (New Zealand Fire Service, 2017, p. 14)

Well we've got peer support whom can kick on referral to our regional safety and health manager, who's got access to psychological health professionals. I'm a peer supporter myself within this area, so we just offer an ear, and then the ability to find someone who could possibly give them some professional help, which is getting better in the fire service, there's heaps of room for improvement I believe though (CA_F)

I've done some peer support in volunteer stations as well, and I'm aware that. . .the response for the volunteers is slightly different than our paid staff, and one of the biggest differences and you may agree with me is they are more likely to come across a person that they know at an incident, be it a friend or a family member, because of the way it works for the volunteers, and so I've been to two responses to our volunteers calling for, for help basically, and very little for our paid staff which is amazing, absolutely amazing, I know that from personal experience our paid staff are less inclined to ask peer support for help, unlike the volunteer staff (CA_M)

A few firefighters reported a need for more communication around the purpose of the peer support system.

The system in place with the peer support is good but I think it needs to be best communicated to all firefighters what the intended model is. (KI)

Leadership modelling is essential to encourage help-seeking

Several participants spoke of the way in which leaders could set a positive tone within their brigades to ensure firefighters view the environment as caring and supportive. While many firefighters observed they were still experiencing some 'old-school' attitudes, some expressed their appreciation of working with a caring leader who was supportive and who showed an interest in their wellbeing.

He's ... really supportive and helpful, like we all talk as a crew, like I said ... he's really good so when I had issues like I said I tried to quit my job last year, he's quite fatherly, you know, so I rung him up and said I wanted to see him and can I come to your home and he just really talked about his expectations of me. (CA_F)

Having a positive personal experience of help-seeking was identified as one potential influence on leaders encouraging others to seek help if needed. For example, one firefighter whose family had been through a lot of stress spoke about how he and his family had been supported through counselling and how they had supported one another. His own experience influenced him as a crew leader and station officer to encourage his crew and other station officers to be relaxed about opening up if there was something going on.

I hope that by doing that with them and showing them that I'm quite comfortable that if they need to talk they'll feel comfortable doing so ...15 years ago I was very much a typical Kiwi bloke – you don't need to talk about this stuff –just bury it deep and no-one will ever see it – you know. But the stuff that I've been through in the last decade, as I said in my family, that has just completely turned that around. You can't just bury that stuff down and hope it never comes to light again because sometimes things happen which so profoundly affect you that you are shaken to your very core of your belief system and you find that your belief system can no longer make any sense of what's in front of you – you actually have to go out there and get some help to reset it all. And try

and find a new framework to work with – so yeah, it's really important that people realise that that can happen and I guess until it actually happens to you, a lot of people don't understand that. (CA_M)

Another firefighter leader spoke about debriefing and monitoring the team as a way to check in on the wellbeing of crew members.

... well we debrief just about everything we go to, whether it's significant or not, when we're dealing with significant incidents we talk a lot more, and I constantly you know over the period of the set of shifts, and into the next week just talk closely with the SSO and, talk to the guys individually, I don't pull them into the office you know because it starts to become quite obvious what you're doing, just take the opportunities wherever I can, ask them how they're going, how's things at home, do they need anything, and we've really built a team where we believe that we've got that good open door, if you're not happy come and talk to me, and we will do whatever we have to do to make you happy. (CA_M)

Several firefighters noted good leaders established a caring tone within their brigades.

When there's good leadership of a crew, a good leader will facilitate those wellbeing conversations and ensure, reassure people that there's no stigma attached to saying that was a difficult job. (KI)

While support was generally reported as being available and being advertised, several firefighters noted it was up to them individually to access support.

We are not encouraged to get support, but we're encouraged that the facilities are there if we want it. We're not told to go and see a counsellor. (CA_M)

Mixed experience of accessing external support services

Only a few firefighters who were interviewed disclosed they had accessed support services.

I use the fire services, their version of EAP, I've had three sessions through that, it was somewhat helpful. (VFR_M)

One firefighter found the time allocated for counselling support was limited.

When I ended up going to that EAP stuff, like the proper actual counselling sessions, I did my six sessions or whatever and was told sorry you are not funded any more. (CA_M)

One key informant reported a lack of trust because of feedback from firefighters who had accessed services.

... they've heard a couple of firefighters had bad experiences dealing with psychologists, and counsellors and so that's been fed back, and so for example, been to the psychologist, didn't understand the role, or the job or couldn't relate to, wasn't a trauma specialist psychologist, so they couldn't help, they had to be referred onto someone else so, so there's quite a lot of sort of, quite a few other, sort of trying to find, I've got my research stuff here, so yeah and attitude was a big one, around not knowing and so isolation sorry, so thinking they're the only ones going through it. (KI)

Mixed views on formal and informal debriefing

Debriefing was described by participants as both formal and informal processes and there were mixed comments about the helpfulness. Career and volunteer firefighters described examples of informal debriefing ranging from the Senior Station Officer asking if they were ok, to discussing the impact of the incident as a team upon returning to the station after an incident. The timing of debriefing sessions ranged from an informal discussion in the fire truck immediately after an event, to back at the station over a cup of tea, or several days later.

Several firefighters expressed concern about the quality of the debriefing process, whether formal or informal, stating that debriefing was ad hoc, didn't really happen, or people did not disclose the impact an event had on them. They described problems in facilitating a session that enabled people to have honest, open discussions.

When I get called to do a debrief and it's confusing and we don't rush out now and do those straight away ... we know to leave them some time to realise it's not appropriate to rush in and do that, we know to leave them some time to realise what they've been exposed to, so we don't normally do it until maybe that evening so if it happened during the night we just say, 'go home and rest if you can' if anyone needs to talk to a peer individually we're happy to do that but how about we have a group meeting? We will come and do that this evening. (KI)

It's really ad hoc and it depends on who's on the truck and what they see as a stressful incident, some of our OICs only see a fatality as a stressful incident and so anything less than a fatality isn't debriefed and everyone is sent home ... some will do just a quick chat in the truck on the way back which I personally don't love because your mind is still at the job, I think it takes 12 hours just to figure out where your mental state is otherwise your mind's still on the job. (VVFR_F)

Debriefing, to be honest with you, I don't think we do that well you know, I think debriefing is a bit of skill and I don't think we've quite got that, in terms of any managed model of helping with psychological wellbeing and fire and emergency has invested in and rolled out and even that like I'm really, I'm not cynical about it, it hasn't been rolled out particularly well. (CA_M)

Spiritual practices associated with debriefing were reported by a few firefighters. These practices involved karakia (blessing the truck and site) and returning to the station to have a meal together prior to debriefing as a brigade and individually.

We'd go away and we'd have a meal together and it didn't matter what time of day or night, it was the crew coming back and eating a meal together, if there'd been a fatality then a padre would come and [name] who ran an army marae, he would also come and they'd do a karakia, they'd bless the truck, they'd bless the crew, sometimes we'd go to the site and we'd bless the site and then army field psychs would come in as well, we'd debrief as a brigade, as a crew and individually as well. (VFR_F)

Barriers to help seeking

A number of barriers to firefighters seeking help were identified. These included: the prevalence of old school attitudes; stigmatisation of mental health issues; perceived lack of confidentiality the potential impact of help-seeking or being open about struggling with trauma would have on job security: and help seeking being seen as a sign of weakness by superiors and peers.

“Old-school” attitudes hinder help-seeking

Many firefighters, both career and volunteer, considered the attitudes of older brigade members made it difficult to be open when discussing the impact of challenging medical call-outs on them.

I think historically this organisation can be quite elitist and as such you know, any kind of weakness is really frowned up, again, this is just my observation and so I think in the past ... it was really frowned upon and really like, you must be a loser if you need help. (CA_F)

We have a really old-school manager level in our organisation and I think it's going to take a while ... because culture change is difficult, some of it's going to be, we have to wait for [person's name] to leave this position until we get some fresher thinking around some of these things. (CA_M)

Stigmatisation of mental health

Several career and volunteer firefighters considered they would be stigmatised by their peers and leaders if they openly sought help when experiencing mental health distress. Their fears often related to the impact disclosing their distress would have on their job security and being seen as a failure. Some firefighters reported stigma among their firefighting peers related to help-seeking and did not feel they could share when struggling to cope with challenging situations.

I mean there's still potentially, not a stigma but almost like I am admitting defeat, like it is about you know, my not coping, that again I would link this to our elitist attitude, that you know, that kind of like admitting defeat a little bit, seen as a real failure. (CA_M)

There is stigma about it, without a doubt in my mind there is stigma about it (help seeking) and it has been discussed, we are all made aware of it but there are quite often you know, little snide comments made about it, tongue in cheek comments so there is stigma. (VFR_F)

Lack of confidentiality

Others expressed concern about confidentiality, being respected, lack of trust in who to confide in and trying to manage their own issues and related stress.

I've referred a couple of people on and it's not too much of a biggie, although there's issues around anonymity, and people have to, and that's the problem with the peer support, is people have to trust you, and unfortunately firemen have a tendency, as people do, to have loose lips and to not maintain confidentiality basically, so people are always on guard. (CA_M)

But the formal stuff, I think the biggest barrier to that in the service is that worry around confidentiality and you know, when things happen ... that makes people a lot less likely to actually formally seek out some extra assistance. (CA_M)

The concern expressed above was in reference to an incident where a firefighter had accessed an independent counsellor external to Fire and Emergency, which he assumed was a confidential service. Afterwards, he was contacted by Fire and Emergency's peer support person who told him he had received a call from the counsellor and was told to support the firefighter.

... he sought help and he sought what he thought was independent help but now this person inside the framework of the Fire Service is aware of and policed it to some extent, what his situation is, so that's not good, I wasn't happy with that. (CA_M)

Confidentiality was discussed as to how job prospects could be affected if it was noted a firefighter was seeking psychological help.

They think that potentially it will affect their future, you know, going forward, promotion and development, and they have this fear the organisation is going to stand them down, or have this mark on their personal file, so there's a whole lot of, there's actually quite a varied range of different reasons, lack of trust was mentioned quite a bit. (KI)

... I think some people who might think I probably could benefit from seeing a counsellor, might be nervous that if they did it might jeopardise their employment for example ... yeah but and that's not true, that's not truth but that's how they might perceive it. (CA_M)

Help-seeking perceived as a weakness

Several firefighters – both male and female – identified they were reluctant to seek help because of how they might be perceived by others. The following male firefighter discussed how he had to challenge his own thinking about the perceived stigma of seeing a counsellor and that it did not mean being weak or not coping but that he now understood seeing a counsellor as being an extension of his professionalism so that he could give the best of himself in his role as a firefighter.

... yeah it doesn't mean you're weak or you can't cope or anything like that, it just means that to me my approach to it now, is that you're actually wanting to do the best you can ... I think there still is some stigma attached to seeing a counsellor, I'd like to think that, it being broken down but, we have a really old school manager level in our organisation, and I think it's going to take a while to, and some of it will be you know because culture change is so difficult ... (CA_M)

Another male firefighter who was diagnosed with depression, reported that his illness had opened his fellow firefighters' eyes to the fact that it was not a sign of weakness to ask for help. When the crew have attended a serious incident, the peer support team will come round and he will be the first to put his name down and his team will follow.

I think me going down with my illness has really opened the eyes of our guys up the fire station in XXX, and you know it's not a sign of weakness to ask for help, and that's why I think these other guys have looked at it and thinking, jeez we might be going down the same pathway, you know. . . (VCR_M)

Another male firefighter who did not feel comfortable about asking for help reported that asking for help was not a sign of weakness, but that it may raise issues of vulnerability and affect relationships with crew members.

I don't know if it is but it's not at all a sign of weakness, but it might show a little bit of vulnerability and the next time you go to something people think, ah shit last time we went to something like this old [name removed] over there he felt a bit queasy. Is he gonna let us down today type of thing. So you sort of don't wanna show a sort of weakness to your crew or anything like that where they may feel they have to carry your weight a bit. (CA_M)

A male firefighter who was also a peer supporter, spoke about the increase in medical responses and wanted firefighters to know that help-seeking is not a sign of weakness.

... it's alright to feel this way when you come back from a call or even when you're at a call, it's not a sign of weakness, so some people think that's changing the image, yeah we can probably accept that but really, it's painting a more accurate image of who we are cos we are people at the end of the day, like everyone else, but yeah we are also courageous, fit and strong as well, so some more things for us to think about. (CA_M)

A number of female firefighters also reported not wanting to appear weak in respect to help-seeking; but added to this was the dimension of not wanting to appear weak in comparison with their male counterparts. One spoke about an instance when she accessed help/support and how initially she was worried about what others would think.

... so it was quite hard because I didn't want to appear weak, I didn't want them to think that I was a, especially being a female, I was less of a firefighter than they were because I couldn't handle it ... I also, being a female that I don't want to be the weakest link and so that probably held me back from seeking help. (CA_F)

When she started to open up about how to other crew members about seeking help, she opened up the space for others to come forward to say they had also struggled.

... sometimes being the mum on the watch, sometimes I felt that me doing that made it easier for some of the other guys to actually come forward ... (CA_F)

Some female firefighters viewed their male counterparts as unlikely to access support because it is perceived as a sign of weakness. They also reported an attitude of just being expected to cope and to 'toughen up' as opposed to being supported and encouraged to talk about the impact of events.

I'm the only female in the brigade but I don't think any of the guys would say to any of the other guys if they were getting support ... it's sort of kept under the covers a bit. (VCR_F)

There is still a little bit of you know, tough man kind of syndrome in [the brigade]. There is much more like you are just expected to cope ... but there is still I think very much a bit of macho sort of feeling there that you know, that you would be showing a bit of weakness if you had to do that [seek help]. (VFR_F)

Looking out for mates and camaraderie as a vital form of support

Camaraderie among firefighters was widely reported as a key strength of a firefighter, particularly for career firefighters who often described their crew as a second family. Both career and volunteer firefighters reported the value of being part of a crew and the close bonds they had with each other. They appreciated being part of a team and enjoyed the camaraderie they shared. Many experienced a 'sense of family' within their brigade.

We are a team and I'm definitely into all that, I think again it comes back to people and personalities individually ... by the very nature if you are the kind of person who looks out for your mate and keeps an eye on them, whether it's casual, 'you right mate?' or a touch on the back or phone calls for the next seven days in a row and being a nuisance, it just depends, everyone is different, but we definitely keep an eye on each other, absolutely. (CA_M)

I think that's what the Fire Service does well is that it creates a family environment, that we are all of team. (VVFR_M)

Look I love working in the team environment, I have a fabulous sort of crew of guys, I'm the only female on the watch, and they're all family orientated and we do lots of social things together. (CA_F)

The team, the people working in a team and going through challenges of all descriptions, but I like the idea that you do it as a group, as a team, it is all about the people. (CA_M)

One participant who was the first Māori female in her brigade enjoyed the camaraderie with her crew.

... it's the brotherhood yeah, so when your watch is good, and you click, it's awesome, and you have a lot of fun sitting around, and you ride the ups and downs together, on the flip side they're a wolf pack ... when you admit weakness ... you're the weakness in the wolf pack. (CA_F)

One Māori focus group participant described how volunteers rely on their families to be able to do what they do, so the camaraderie extends across families.

I'm a volunteer so you become part of so many different whānau, so in a volunteer station it's not just the guys and girls who are there, you become part of their families cos without family then we don't have much support to do what we do so that's been the real enjoyable thing, is hanging out with your mates and becoming part of a massive whānau. (VCR_M)

Another Māori focus group participant said when the fire alarm went off in her small rural community, others leapt into action to take care of her children - if it was during school hours, the teacher would take her children home until she collected them.

A specific practice reported by both career and volunteer firefighters consistent with looking out for each other was the allocation of roles to shield colleagues from tasks that would be difficult for them. This practice was usually in relation to medical calls but also applied to other non-fire and fire roles.

We have one guy come on our watch who has never been keen on medical calls ever since we took over into going into them and medical calls are CPR and your sort of suicide and for a long time, probably for the first couple of years, we would swap positions in the truck so that he didn't have to come in, yeah, if we were going in to do CPR and sometimes the driver would actually stay down at the truck, we would leave him at the truck, we would swap positions and leave him at the truck, so he didn't have to come in cos he really struggled with it ... (CA_F)

... If they see something say like a bad car crash, one person on that particular day they don't sort of feel like being right in the front of all the harm to people and stuff, so, they'll say, 'oh I'll put some cones out or something' you know? And, we talked about it, without actually knowing, so subconsciously they've actually taken themselves away from that scene to do something else, you know? And, that's fine if they want to do that ... some people don't like doing first aid, look I'm not overly keen on doing first aid but I don't mind, as an officer, I don't mind telling other people how to do it or what to do, but, if there was another job to do I would take that rather than doing the first aid, you see? ... so, everyone has their own skill set but also their own mind set on that particular day, what they feel comfortable doing and what they don't feel comfortable doing. (VCR_M)

While this was generally viewed as a practical solution to support their colleagues, one key informant noted this may compromise the effectiveness of the crew working as a team.

... I actually saw that on a day when we went to a cardiac arrest, and I knew a little bit about the history of the person, and he didn't, he stayed in the vehicle, so that's one sort of coping mechanism, it's not ideal because we work as a crew with a limit of people, and when you're engaged in lengthy CPR you actually need everybody on hand, because it's a very physical process, you can only sustain good CPR for about two minutes before you need a break, so that's one extreme ... (KI)

Black humour used to alleviate tension and distress

Many firefighters reported black humour as a coping mechanism. This form of humour related to the camaraderie between firefighters, was isolated to conversations in the fire truck and within the station and was described as helpful for reducing tension and coping in the moment. Firefighters reported that the use of black humour is measured and care taken to ensure that it does step over boundaries and that it is restricted to use among crew members.

We have a lot of black humour and it stays in the truck and within the station. We have to sometimes use black humour. Black humour works but also knowing where that line is as well, I think I went to an incident the other night where one of the guys almost got squashed by a lift assist so we used black humour to diffuse the situation and if we use it the right amount it works, if it goes too far then we pull back. (CA_M)

... if it's been a particularly nasty thing we always have a debrief after, and people get to speak, a lot of people don't like to speak up in those sorts of things, and you find that fire-fighters use black humour around the mess table, if you sit down have a cup of tea or cup of coffee after you've been to somewhere, and you know, I mean it's not very PC but a little bit of black humour you know people have a bit of a laugh, and some of the tension you know eases away. (CA_F)

But often there is the informality and sometimes there is a bit of black humour involved and stuff which is good, it is a coping mechanism as well because it helps remove your personal relationship to the event if that makes sense. (CA_M)

Personal strategies adopted to cope with and process experiences

In addition to formal and informal support processes within their brigades, many participants, both male and female, spoke of a wide range of strategies they adopted in their personal lives to take care of their mental and emotional wellbeing. Being able to talk to family members was widely considered an effective support mechanism outside of the brigade. Some participants reported attending church and spending time with their kaumatua.

Both firefighters and key informants who were also firefighters reported keeping busy with activities such as running, yoga, fishing, going to the gym, walking and socialising with their crew members, as a way to control the negative stresses of the role.

There's a range of things, so some will go to the gym or go for a run, just to sort of clear their head or something, there's also some that will go fishing or various things, some brigades they get together or they might have had run and they'll get together on a Sunday afternoon with all their family and have a shared meal, like a pot luck dinner or something yeah, and just be able to talk to each other. (KI)

Family members were reported to be an important source of support for many firefighters.

So you're looking for someone to confide in or discuss what you've dealt with and it's always nice to be able to talk to someone who is impartial, doesn't work in the environment or know or understand necessarily but they can just listen and be there. (VVFR_M)

[Family] plays a big role in my opinion ... the family does help in a big way because I know sometimes when I go home and the wife will say to me, 'what sort of day have you had?' knowing full well that I'd probably just attended a motor vehicle accident or house fire where there's been injury or death or something like that, and a quick chat to tell her what it's all about and it's all over and she'll leave me alone until the next day and I'll be as good as gold. (KI)

My lovely wife is quite unique, she helped the surgeon fix my face up when I was sitting in the hospital because they were overwhelmed, so she was helping the surgeon clean everything up and also she has spent time on station so she has seen what I do for a job, she has seen it first hand, including the traumatic side of things a couple of years ago, she is a good sounding board so I tell her if I am not feeling that flash and then she will kick me in the butt to get the help that I need if I need it. (CA_M)

I talk to my dad quite a lot because he's police so he's seen quite a lot of things as well, so we can relate on that level, so it's quite good having someone to talk to that understands your point of view that's not in the brigade. (VCR_F)

Some firefighters reported psychological strategies they use to deal with unpleasant and stressful events. One firefighter said he stored what had happened in his head, treating his head like a filing cabinet where he could file things away and every now and then he would have a look through the files and think about what happened before putting them away again. This gave him a sense of control over what he looked at and when.

It was after the Christmas Day call and I played a lot of computer games afterwards, after objectively looking at it, it's an element of something that I can control, that's something I'm able to switch off to so-to-speak, so that's what I do, I work out, all the events for lack of a better phrase it gets into a box in the head and they just get kind of picked at as time goes on. (VVFR_M)

Another firefighter explained how firefighters needed to find the balance between showing care for the whānau while at the same time protecting the firefighter crew from becoming so emotionally connected they could not separate themselves from the scene.

I think one of the challenges we face especially when we're going to suicides, purple calls, dealing with the deceased's whānau and stuff like that is finding that balance of having that empathy and opening yourself up to it, and then closing off as well at the same time so that, yeah, so you don't go too deep and you don't get hurt too bad. But where's that balance? I never got told where that balance would be or how involved to get or how not involved to get or anything like that ... (CA_M)

Regular mental health checks an option to consider

The idea of integrating regular mental health checks for firefighters was raised by several participants, and was typically discussed in conjunction with what they believed was happening in other emergency services, particularly the police. Two different scenarios were identified whereby this might happen: an annual psychological check-up, and a psychological check-up that was activated after attending a certain number of calls involving fatalities. Several participants raised the idea of the emergency services sharing best practice.

Personally I don't see why the mind is any different from your physical being it's all part and parcel, but we have physical checks and you know, heart rate, blood pressure, you know, sight, lung capacity, whatever it is that we have in our physical side of it, hearing and all that, but when it comes to, and that's a yearly thing that's available for us to take up, but definitely nothing on a psychological side, and personally I think that that is needed. (CA_M)

The police I believe they do have, you go to three fatalities you're in front of a, I'm not sure what level, a psychologist, I'm not sure my ignorance what the different sorts of clinical psychology terms, and I think the fire service nationwide should probably just talk to the cops and say, 'is that working for you guys?' and if they say, 'yes it is' they should just adopt it, they don't have to reinvent the wheel, the police do different stuff to us, the police are hated, that's got to be stressful. (CA_M)

Having some form of regular mental health check was viewed as one way to contribute to the destigmatising of mental health concerns. However, the introduction of compulsory psychological wellness checks was not viewed by everyone as a risk free strategy. One participant felt the notion of

compulsory mental health checks might not be supported by all firefighters, or firefighter unions. Requiring people to access psychological help was also noted as having potentially negative outcomes for individuals.

... as soon as you say the word compulsory or mandatory, that's a red rag at a bull ... (KI)

I think being able to, if there was a blanket everyone talks to x counsellor once a year, would help alleviate some of that, and I think it would get help to the people who probably need it, and remove some of the issues around that, but that's only my opinion you know, some people, I suppose forcing them to see a counsellor might be worse for them potentially, I'm not too sure. (CA_M)

4. Discussion

4.1 Introduction

Firefighting is both a mentally and physically challenging profession with firefighters being exposed to a range of stressors in their medical and non-medical roles. Career and volunteer firefighters in New Zealand are increasingly required to attend to medical and other non-fire calls, including suicides, heart attacks and respiratory arrests. In New Zealand, as elsewhere, the negative stress firefighters experience is a relevant concern for firefighters and emergency agencies (Duran, Woodhams, & Bishopp, 2018).

This research has investigated firefighters' views about attending non-fire calls, the impacts from attending them, as well as how impacts on firefighters are mitigated through preparation for the role and through support provided by Fire and Emergency and other sources. As well as incident-related stressors, organisational stressors were investigated.

While many of the results reported in the preceding section are consistent with the existing literature, a key strength of the research is it provides local evidence on which Fire and Emergency can base the ongoing refinement and development of recruitment, training and leadership development initiatives to strengthen support for firefighters and particularly for volunteer firefighters.

The discussion highlights key results and suggests potential areas for Fire and Emergency to consider in developing actions⁶ to support the psychological wellbeing of firefighters.

4.2 Improving the environment and culture for firefighters

The current study identified a broad acceptance of attending medical calls among firefighters and this role was viewed as being part of a modern emergency service. Some barriers to developing a consistent, supportive and safe environment for firefighters were identified and these challenge fulfilment of a key guiding principle of the *Safety, Health and Wellbeing Strategy 2017-2022* that "nothing is more important than our people" (Fire and Emergency New Zealand, 2017).

There was some resistance to an increasing medical role noted, and this was identified as more likely to occur among longer serving firefighters. The introduction of the co-response medical role was viewed as having been poorly communicated both to firefighters and the general public.

Fire and Emergency are committed to being an organisation that reflects the communities it serves (Fire and Emergency New Zealand, 2018). This is consistent with a long-standing argument that having a representative workforce in emergency services is likely to lead to better outcomes for the population (Andrews, Ashworth, & Meier, 2014). Some challenges to achieving representativeness were noted. Māori firefighters reported past and current difficulties of being Māori within Fire and Emergency. This finding echoes earlier local research where Māori firefighters reported tensions occurred because their cultural beliefs, practices and te reo were not recognised or accepted (Allen + Clarke, 2016). Firefighting was also identified as a masculine domain with the level of acceptance for

⁶ These are not framed as recommendations as there a number of actions and initiatives already underway within Fire and Emergency, and the current research project was not able to scope or assess these in any detail.

female firefighters varying across brigades and gender stereotyping persisting, particularly in relation to females' firefighting roles. This supports earlier research which identified gender-based challenges for female firefighters who felt they had to prove themselves to men and had to deal with stereotypes about them as women (Allen + Clarke, 2016). Although the Fire and Emergency was noted as being predominantly Pākehā and male with Māori under-represented, Māori firefighters reported that change was happening. Developing an inclusive environment for all firefighters is arguably central to providing a safe and supportive setting where positive mental health and wellbeing initiatives and practices are encouraged

Areas for action:

These results indicate Fire and Emergency could consider initiatives to:

- build further support for the importance of the medical role among 'reluctant' firefighters
- actively communicate the medical and other non-fire roles to the general public
- give greater effect to the commitment to Māori firefighters implied by the prominent positioning of Whakaratonga Iwi on the logo
- continue and/or enhance the recruiting, supporting and retaining of Māori and women firefighters
- ensure inclusiveness training is provided to all firefighters

4.3 Limiting the impacts of medical calls on firefighters

Firefighters in this study reported that attending non-fire incidents such as medical calls, motor vehicle accidents and suicides had positive and negative impacts on them and their families. Negative stress was reported to have a number of contributing causes: limited success due to purple calls generally having a high death rate, anxiety when attending medical calls, dealing with people and families, what is seen at incidents, negative stress being cumulative, attending incidents when the person is known, and stress that arises from other parts of the role. Consistent with the literature these events can be highly demanding and stressful (Benedek, et al., 2007; McLennan, et al., 2009; Regehr, Hill, Goldberg, et al., 2003; Regehr, Hill, Knott, et al., 2003) and can overwhelm the firefighters' normal ability to cope (Harris, et al., 2002). For example, a number of firefighters reported experiencing anxiety about their performance and feelings of self-doubt. Several firefighters also noted their behaviours at home may also be affected such as being quiet or withdrawn which was also reported in earlier research with the families of volunteer firefighters (Litmus, 2017).

In the current study there were firefighters who reported they experienced personal growth and resilience because of their experiences. This is also consistent with the literature (Gist, et al., 1997). While attending critical events were reported as causing stress reactions, many firefighters reported they were able to maintain their usual level of functioning. This is reflected by some firefighters in the current study who perceived their role as having a positive effect on personal and family life. They reported valuing and appreciating these aspects more and considered they were better able to cope with emergencies in their personal lives.

Areas for action:

These results indicate Fire and Emergency could consider initiatives to:

- educate families about the potential negative impacts on firefighters and ways they can support firefighters and reduce the effects on family members
- build the skills/resilience of firefighters to counter known stressors (see following section for specifics)

4.4 Improving the preparation of firefighters

Most firefighters equated preparation with training for their role. With regard to this, firefighters reported mixed views. Some career and volunteer (co-responder) firefighters reported being well-trained, while others considered they were not well trained for their roles. While the training provided was generally reported as being high quality, some firefighters reported the rapid introduction of co-response responsibilities contributed to a sense of lack of preparedness. Training was considered by some to be limited to a specific range of skills such as CPR – which was widely reported as a skill firefighters have the confidence to undertake. Many participants suggested that a higher level of medical training would be of benefit.

There was also a need for more training in relation to working cross-culturally, particularly in relation to Māori and processes and protocols when death occurred. Another area where training was indicated included dealing with families at incidents. Similar findings have been reported for firefighters elsewhere including the desirability for more training in emergency care and also in skills in communication, particularly in relation to attending to suicides (Jacobsson, et al., 2015).

These results suggest that reframing what success looks like for firefighters when they attend purple calls is warranted. Attending these calls was reported to contribute to higher levels of emotional distress for firefighters through them experiencing a sense of helplessness because they were not able to achieve a good outcome, which for them was saving lives. A reframed outcome could be that the job was carried out well with correct processes being followed and appropriate care provided by crew members.

Such results suggest a need for a more comprehensive and in-depth approach to the training of firefighters particularly in light of the extent to which call-outs are non-fire related.

Areas for action:

These results indicate Fire and Emergency could consider initiatives to:

- build confidence and surety among firefighters they are appropriately trained for their medical responsibilities
- provide opportunities for more advanced medical training for firefighters who are interested
- build a more comprehensive suite of training initiatives to meet firefighter needs (e.g., communication skills, working with Māori, managing/monitoring psychological wellbeing, dealing with stress)
- ensure resilience and psychological training is provided to all firefighters

- communicate what a realistic understanding of what ‘success’ looks like in medical calls
- provide ongoing scenario training for first aid so crews are more fully prepared for medical calls

4.5 Strengthening support for firefighters

There were a range of formal and informal sources of support identified by participants. Positive views were expressed about informal sources of support such as camaraderie experienced within crews. Firefighters in the current study viewed camaraderie and opportunities to socialise and relax with their peers as important sources of support and this is consistent with the literature, which has reported a culture of camaraderie and loyalty is common amongst firefighters, and many feel a strong sense of purpose and connection with their communities (beyondblue, n.d.). While some firefighters valued formal debriefing processes there was generally a preference amongst participants for more informal approaches to debriefing that focused on wellbeing rather than operational issues. Given that research findings on debriefings (Gist, et al., 1997; Mitchell & Everly, 1997; Ostrow, 1996) been neutral or negative due to lack of reliable evidence that debriefing prevents adverse psychological reactions (Foa & Meadows, 1997), it could be concluded that more personal, informal practices are preferable.

According to the literature, the leadership style and behaviour of brigade leaders are related to teamwork effectiveness and satisfaction among firefighters in a department (Bartolo & Furlonger, 2000; Useem, et al., 2005). The issue of leadership was discussed by many participants in the current study, with good leadership seen as key to building a culture of help seeking where firefighters are able to access support and communicate experiences related to attending traumatic events. Some participants expressed concerns over some ‘old school’ attitudes that prevailed in their brigades. These attitudes appeared to create barriers to seeking support as participants did not want to appear weak or as not coping. Some were also concerned that speaking out would impact on their careers.

Given there continues to be stigma associated with mental illness it is not surprising that only a few participants reported accessing EAP or other psychological support services. Similar findings are reflected in the literature with the percentage of emergency responders seeking treatment being significantly lower due to the strong stigma associated with mental illness, perceived possibility of confidentiality breaches and culture of self-reliance that is common among first responders (Erich, 2014; National Volunteer Fire Council, 2012). The literature also suggests firefighters may also lack the confidence to approach someone for help (beyondblue, n.d.). Participants in the current study also reported a lack of understanding of the peer support system implemented by Fire and Emergency. This suggests a need for improved communication and training by Fire and Emergency towards available sources of support.

Areas for action:

These results indicate Fire and Emergency could consider initiatives to:

- continue to build skills of brigade leaders, especially among ‘old school’ leaders, to build and maintain environments that encourage help seeking and foster a culture where it is OK to ‘ask for help’

- reinforce the importance of firefighters looking out for each other and their role in creating environments that encourage help seeking
- improve knowledge among firefighters of available support
- enhance the confidentiality of support services to ensure fair and easy access for all firefighters
- train officers in how to debrief effectively so that crews share how they are feeling and officers know how to offer ways of seeking help

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Appendices

Appendix 1: Interview guide (key informants)

Ready to Respond:

Understanding the impact of illness, injury and death on firefighter wellbeing

As you know we are interested in exploring your views about non-fire incidents on the wellbeing of firefighters. Key informants have been chosen as their role or experience gives them an insight into firefighter wellbeing.

I am interested in hearing about your role in FENZ (or other organisation).

Does your role particularly support firefighters wellbeing? If so, how?

Do you have other experiences that give you insight into firefighter wellbeing? (e.g., they may also be/have been a firefighter)

What do you consider are the main challenges for firefighters attending non-fire incidents?

Are there any particular challenges for firefighters in attending medical call-outs?

- How well prepared are firefighters for attending medical call-outs?
- Do you think there are ways that firefighters could have been better prepared?

What impact do you think the challenges of attending non-fire incidents and medical call-outs have on firefighters? (both negative and positive)

- Prompts – personal, family, work, firefighter role, community

What do you think is the impact on firefighters who attend non-fire incidents when they know the person/people involved?

What do you consider to be the support needs of firefighters around psychological wellbeing?

Are there particular needs that arise from firefighters attending non-fire incidents?

In what ways do you feel firefighters take care of their own psychological wellbeing?

What support do you see firefighters accessing to manage challenging and stressful experiences in their role?

- Prompt: services, spiritual and cultural beliefs, family

What are the key ways FENZ is responding to the psychological wellbeing needs of firefighters?

How well do you think FENZ is responding?

- What are the areas of strength?
- What needs improving?

In what ways do you think firefighters could be better prepared and supported for non-fire roles?

Is there anything else you would like to say about firefighters and wellbeing?

Appendix 2: Interview and focus group guide (firefighters)

Ready to Respond:

Understanding the impact of illness, injury and death on firefighter wellbeing

Before we start the interview I have a few demographic questions – these are just useful so we can describe the sample in our reports:

- Can you please tell me which ethnic group/s you belong to?
- Can you please tell me your age?

As you know we are interested in exploring your views about the impact of non-fire incidents on the wellbeing of firefighters. You can talk to us about your own experiences or what you observe among other firefighters.

Firstly, we are interested in hearing about your role as a firefighter

- What is your role as a firefighter? (volunteer, career, rural volunteer, first responder etc.)
- How long have you been in your role?
- What are the most enjoyable parts of your role?
- Which parts gives you most satisfaction? Why's that?
- What challenges (if any) do you experience in your role?
- What strengths do you bring to your role? (e.g., mental strengths, resilience)

How do you feel about firefighters doing work not related to fires?

Have you ever been involved in attending a non-fire related incident or medical call-out?

- If yes, what kinds of incidents have you attended? What proportion of your role is involved in these types of incidents?
- If no, ask if any of their colleagues have attended such incidents.

Have you ever attended a non-fire incident when you know the person/people involved?

- If yes, what was that like for you?

Some firefighters report that attending non-fire incidents and medical call-outs can be mentally challenging and stressful. What are your thoughts about that? Have you ever felt anxious or a bit down after attending an event?

Have you observed other firefighters finding this challenging and stressful? [probe for examples]

How about you – have you found this challenging and stressful? [probe for examples]

Do you think the challenges of attending non-fire incidents and medical call-outs have an impact or effect other areas of your life outside of firefighting? (both negative and positive)

- Prompts – personal, family, work, firefighter role, community

After attending a non-fire incident or a medical call-out is there anything you do to take care of your mental health and wellbeing? Any specific coping strategies? (Interviewer pick one example, debriefing with a mate or friend, talking with your partner, going for a walk or run)

What support do you access to manage challenging and stressful experiences that arise as a result of attending non-fire incidents or medical callouts?

- Prompt: services, spiritual and cultural beliefs, family

What are the attitudes in your brigade towards help-seeking or getting support?

- Prompt: Do you feel help seeking is encouraged?
- Prompt: Is there anything that stops you or other firefighters from accessing support?

What are the practices within your station that help firefighters manage challenging and stressful situations?

- Prompt: leadership, informal and formal debriefing, camaraderie, brigade culture
- Prompt: do feel you can talk to others (debriefing), are open honest discussions encouraged?

How well prepared were you for attending medical call-outs?

Do you think there are ways that you could have been better prepared?

Is there anything else you would like to say particularly about wellbeing as it relates to non-fire roles?
