



**FIRE
EMERGENCY**

NEW ZEALAND



Women's Career Progression at Fire and Emergency New Zealand

What is Already Known, and Where are the Gaps?

Fire and Emergency New Zealand Research Report Number 188

ISBN Number 978-1-92-728753-8

ISSN Number 2703-1705

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Dyer, Dr. Suzette, Hurd, Dr. Fiona, Algera, Dr. Puck (2022). Women's Career Progression at Fire and Emergency New Zealand: What is Already Known, and Where are the Gaps? Report Prepared for Fire and Emergency New Zealand. University of Waikato, Auckland University of Technology, Kin Strategy.

This research was commissioned by Fire and Emergency New Zealand and undertaken by independent researchers. Publication does not indicate Fire and Emergency New Zealand's endorsement of the findings or recommendations.

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Women's Career Progression at Fire and Emergency New Zealand: What is Already Known, and Where are the Gaps?

A Literature Review and Agenda for Research

Prepared for Fire and Emergency New Zealand

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20 September 2021

Executive Summary

This report is prepared for Fire and Emergency New Zealand (FENZ) as a review of previous research, and to inform future projects concerning the career progression of women within the organisation. Despite over 20 years of commissioned research, and organisational initiatives, women remain underrepresented throughout FENZ, including in leadership positions. Moreover, previous studies have tended to focus on a particular sub-section of the FENZ workforce, such as volunteer firefighters (UMR Research, 2003), or on a specific operational area, and have had a high rate of male respondents. To theoretically inform future research and initiatives, a review of the previous research within FENZ/New Zealand Fire Service (NZFS) was combined with a comprehensive review of literature on women in fire and emergency and women's career progression in male-dominated industries. Therefore, the aim of this research was to

identify where gaps in our understanding of women's career progression in FENZ might be, to assist in the achievement of aspirational goals of FENZ management to create an inclusive, diverse workforce.

This research was carried out using a systematic literature review methodology in four distinct phases. Firstly, a review of research on women in male-dominated industries was applied to theoretically frame the remainder of the fire and emergency-specific review, and is found in Section 2. This section concluded that women in male-dominated industries experienced barriers in the form of hostile work environments, work-family pressures, and organisational barriers. These barriers were framed theoretically in Section 3. Section 3 shows that barriers tend to be explained through the lens of either deficit models which assume women lack necessary skills or physical characteristics, or through gender role and stereotype theories or intersectional explanations. Responses to address these barriers are proposed at both organisational and individual level.

In the second phase, appearing in Section 4, a review of research on women in fire and emergency roles globally revealed that the barriers experienced by women within the sector mirror those experienced within wider male-dominated industries, including a hostile work environment and lack of flexible work arrangements. In addition, issues with ill-fitting equipment, and lack of provision of facilities such as toilets, showers and changing rooms were widely reported. It was interesting to note that while many reports documented significant discrimination and challenges on the one hand, on the other, several studies paradoxically highlighted the commitment that women across the sector felt towards their roles. Pathways to change for the sector generally fell into five key areas: recruitment initiatives and processes, working to reframe the firefighter within society, adjusting gear

and work arrangements, leadership development and support, and wider organisational culture change.

The third phase of the review, presented in Section 5, reports on research commissioned previously by FENZ/NZFS. It was found that overall, there is a lack of research on women's experiences within previous FENZ studies, and more specifically, to an absence of studies focused on women's career progression. Previous FENZ studies highlighted similar findings to those seen globally, including evidence of gender bias and an assumption that women firefighters were less able to perform. There were findings that indicated career progression may be an issue, however none that focused on the barriers or enablers to career progression as experienced by women. Successive reports seemed to indicate a range of initiatives and recommendations had been made to improve the number, retention, and treatment of women within FENZ. However, despite these specific initiatives, it appears that many of the issues highlighted in later reports mirror those seen in earlier reports. Some of the reports highlighted issues underpinning the slow change, including structural, cultural, and leadership factors.

The fourth phase was presented in Section 6. It reviews key policies related to women's career progression at FENZ, and reports on policy initiatives which have been put in place since the publication of Shaw's report in 2019.

Several gaps emerged from this project, including a gap in qualitative studies highlighting the experiences of women working within fire and emergency. Moreover, most previous research across the reviewed literature focused on recruitment, or specific operational groups within the workforce. What was missing is an intersectional focus on how women within fire and emergency view their career, and how they see the organisation as part of this career progression.

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List of Abbreviations

CARN – Cross-Agency Rainbow Network

CFO – Chief Fire Officer

D&I – Diversity and Inclusion

EEO – Equal Employment Opportunities

FDNY – Fire Department New York

FENZ – Fire and Emergency New Zealand

HM Fire Service Inspectorate – Her Majesty’s Fire Service Inspectorate

ILO – International Labor Organization

LAFD – Los Angeles Fire Department

LGBTQIA+ - Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual plus

NZDF – New Zealand Defence Force

NZFS – New Zealand Fire Service

NZFSC – New Zealand Fire Service Commission

RWAN – Regional Women’s Advisory Network

SOGIESC – Sexual orientation, Gender Identity and Expression, and Sex Characteristics

UK – United Kingdom

UN – United Nations

US – United States of America

WFENZ – Women in Fire and Emergency New Zealand

1 Introduction

Women have quite different career experiences and outcomes compared to men. For example, women remain overrepresented in specific occupational and industrial categories (e.g., teaching and nursing and the corresponding sectors of education and health), and underrepresented in managerial levels (International Labour Organisation (ILO), 2019; Statistics New Zealand, 2021). Moreover, the ILO (2019) confirms that women experience individual, organisational, social-cultural and structural barriers and enablers to career progression. Women's role in the home, access to education and training, stereotypes, organisational processes and practices and infrastructural support systems continue to shape women's employment and career choices and outcomes.

Within organisational research, a series of metaphors, including sticky floors, and glass doors, walls, escalators, ceilings and cliffs are frequently drawn upon to examine barriers to women's careers (Cousins, 2020; Mohsen, 2015; Ryan & Haslam, 2007; Saavedra, Araújo, de Oliveira & Stephens, 2014). These metaphors are particularly useful for capturing the processes and practices that prevent women from moving into, around and up within male-dominated occupations and industries, including their slow progression up managerial ranks, even in female-dominated fields. Similarly, research consistently highlights the importance of education and training, and networking and mentoring as enablers of women's careers in male-dominated occupations and industries and into senior roles (Dashper, 2018; Emmons, McCrory & Oxnevad, 2019; O'Donnell, 2008). An in-depth review of prior research on enablers and barriers will provide an important starting point for framing an examination of the unique and shared career experiences of women across Fire and Emergency New Zealand (FENZ) with the purpose of supporting FENZ to integrate women more fully throughout the service.

Research over the past 20 years on women in FENZ has examined recruitment and retention (Brough & Smith, 2002; UMR Research, 2003), and more recently, on harassment and

bullying (Shaw, 2019) and on developing the case for greater gender diversity (Male Champions of Change in Fire & Emergency, 2019). These reports consistently highlight that discriminatory behaviours and cultural barriers impact on the experiences of specific groups of women joining the organisation and on women's career progression within FENZ. At the same time, these reports have offered a series of recommendations, and we acknowledge the considerable work undertaken by FENZ to implement them to create positive workplace outcomes for women, and in particular, following Shaw's Report (2019).

We also acknowledge that women are just one group within the diverse workforce that helps connect FENZ to the communities it serves. Moreover, the movement from binary understandings of gender, renders an analysis on the experiences of women problematic, without the acknowledgement that there are more than two genders represented within FENZ, and within the wider community. Indeed, there is very little previous research that even mentions experiences of the wider LGBTQI+ community, or even the experiences of culturally diverse members of the global fire and emergency workforce. These are important gaps to be filled, and we hope that a deeper understanding of the inclusivity issues facing women might also unlock those at the intersections of gender/ethnicity/different abilities.

However, we also know that women remain under-represented throughout FENZ, including in leadership positions. Moreover, the previous studies have tended to focus on a particular sub-section of the FENZ workforce, such as volunteer firefighters (UMR Research, 2003), or on a specific operational area, and have had a high rate of male respondents. Our interest in this project is to explore the barriers and enablers to career progression experienced by women working at FENZ. The aim of this research is to *identify gaps in the current understanding of women's career progression at FENZ to assist in the achievement of aspirational goals of FENZ management to create an inclusive, diverse workforce.*

To underpin this interest, the first step was to conduct a significant review of previous research on the experiences of women in male-dominated industries and occupations including a review of international and FENZ research on women's experiences of working in fire and emergency services, as discussed next.

1.1 Methodology

This research used a systematic literature review methodology to build on previous work on women in fire and emergency services and is strongly linked to FENZ' strategic priorities. This literature review was conducted in four key phases of 1) Reviewing national and international research focusing on women in male dominated occupations and industries, 2) Reviewing international research on women in fire and emergency services, 3) Reviewing previous research commissioned by FENZ with a focus on inclusion and diversity, and 4) Reviewing FENZ policy initiatives relating to improving women's careers. These phases and associated search terms are presented in Appendix 1.

From the above search, the literature was entered into a spreadsheet for analysis, noting descriptive details such as year, methodology, and key findings, as summarised in Appendix 2. From here, a thematic analysis was performed to group these key findings into themes. These themes are presented in this report.

1.2 Format of the Report

To situate FENZ within the broader context, the report begins with a review of research examining women working in male-dominated industries and a review of international research examining women working in fire and emergency roles. Given the breadth of the research examining women in male-dominated industries, Section 2 summarises some of the key barriers faced by women. Section 3 reviews some theoretical explanations of women's position in male-dominated occupations and industries, and strategies adopted to

improve women's access to and movement within male-dominated industries and occupations. The themes presented in Sections 2 and 3 can be drawn on to help make sense of the more specific focus of women's experiences in fire and emergency services. Sections 4 and 5 review the international literature on women in fire and emergency roles and the research focusing on women's experiences of working in FENZ, respectively.

2 Women in Male-dominated Industries

Globally, a series of International Labour Organization (ILO) and United Nations (UN) Conventions focus on improving girls and women's labour market outcomes and employment equity for women. New Zealand governments have expressed commitment to these global initiatives by ratifying ILO Conventions C100 Equal Remuneration Convention, 1951 and C111 Discrimination (Employment and Occupation) Convention, 1958, in 1983, and the UN Convention for the Elimination of all Forms of Discrimination Against Women in 1985 (Ministry of Business, Innovation, and Employment, 2015). These Conventions aim to improve women's labour market outcomes by removing gendered discriminatory barriers to pre-employment education and training and throughout all phases of the employment cycle, and by establishing gendered pay equality and pay equity. The intended outcomes of these aims are to broaden girls' employment options, enhance women's access to and movement in occupations of choice, and improve women's income and life-time earnings.

To implement these ILO and UN conventions, New Zealand Governments have developed a minimum anti-discrimination framework setting out certain rights and obligations regarding women's employment (Ryan, Ravenswood & Pringle, 2014). This framework includes the Equal Pay Act 1972, Equal Pay and Amendment Act 2020, the New Zealand Bill of Rights Act 1990, The Human Rights Act, 1993, and the Employment Relations Act 2000 and subsequent amendments. Collectively, these Acts make it unlawful to discriminate on the grounds of gender, sex, marital or parental status, set the foundation for pay equality, and stipulate paid and unpaid parental leave and flexible work entitlements (Hurd & Dyer, 2012).

In line with this, New Zealand and international organisations have implemented various strategies to enhance women's employment outcomes, including to improve women's access to and movement within non-traditional and male-dominated industries and occupations. Organisational initiatives are often captured by an umbrella approach such as equal employment opportunity policies, affirmative action plans, and diversity and inclusion initiatives (Oswick & Noon, 2014). Specific approaches used to increase women's entry into male-dominated occupations and industries include designing recruitment and selection strategies and job descriptions that align with actual job tasks (Danbold & Bendersky, 2020). Policies and practice to facilitate women's movement within and up organisational hierarchies include providing timely career planning information and tools, increasing mentoring, networking, and developmental opportunities for women, and designing talent management and succession planning processes (Chow & Ng, 2011; Devos, 2008; Germain, Herzog & Hamilton, 2012).

Despite an ongoing commitment to gender equality in employment, New Zealand women continue to be concentrated in a narrow range of occupational and industrial categories, a phenomenon commonly referred to as horizontal segregation. Thus, 60% of working women are concentrated in four industrial categories of healthcare and social assistance, wholesale and retail, education and training and other business services (Statistics New Zealand, 2021). New Zealand women also experience vertical segregation, which means women are under-represented in senior leadership, board membership and governance roles. While near parity has been achieved in the public sector, women in the private sector account for 19% and 18 % of Board members and senior managers respectively (Human Rights Commission, 2021). Significantly, women senior managers declined between 2014 and 2015 from 21% to 19% (Ministry for Women, 2016). These results show that New Zealand is in the bottom ten nations in terms of women's representation in senior leadership roles (Human Rights Commission, 2021) with board membership being lower than comparative nations (Ministry for Women, 2016). Moreover, New Zealand continues to experience a gender pay gap (Human Rights Commission, 2021); which is currently sitting at 9.5% (Ministry of

Women, 2021) and 80% of the income gap remains unexplained (Pacheo, Li & Cochrane, 2017). These outcomes are not unique to New Zealand; rather, horizontal and vertical segregation and the gender pay gap are enduring features of international labour market outcomes (International Labour Organization, 2016; United Nations, 2021).

Despite the international prevalence of horizontal and vertical segregation in employment, women are making inroads to a number of male-dominated industries and occupations. Alongside these trends is a growing body of international and New Zealand research and commissioned reports examining the experiences of women working in a range of male-dominated fields, including within the police force, fire services, military, aviation, construction, and transport; and in occupations such as senior managerial, leadership, and administrative roles, truck driving, engineering, and software development (Dorrance Hall & Gettings, 2020; Griffith, 2019; Ministry of Defence, 2014). A review of this research reveals several recurring themes regardless of the particular occupation or industry being examined, whether the research is quantitative or qualitative, or whether the research was based in New Zealand or internationally. Therefore, in this section the review of this literature is organised around the three emergent themes of 1) barriers experienced by women, 2) theoretical explanations for why gendered outcomes persist, and 3) strategies designed to enhance women's access to, retention in, and movement within male-dominated industries.

2.1 Barriers Experienced by Women

Research examining women's employment experiences within the context of male-dominated industries and occupations consistently reveal that women encounter barriers that affect their employment. These barriers include encountering hostile work environments, work-life pressures, and organisational barriers as captured by glass metaphors.

2.1.1 Hostile Work Environments

An offensive, intimidating, or hostile work environment (Mink, 2000) is characterised by the presence of threatening, bullying or harassing behaviours at work (Alterman, Luckhaupt, Dahlhamer, Ward & Calvert, 2013, p. 661). Sexual harassment (Griffith, 2019) and workplace incivility (Dorrance Hall & Gettings, 2020) are particularly linked to creating and maintaining hostile work environments and are more pronounced for women in general and for women working in male-dominated industries and occupations (Dyer & Hurd, 2021).

Hostile environment sexual harassment is defined as behaviours of a sexual nature that a typical person would find offensive, and may include verbal, visual or physical forms, such as jokes, posters, and touching (Mink, 2000). As many as 50% of women experience sexual harassment during their working lives (Latcheva, 2017). Women police officers in the US, for example, report that a daily fight with sexual harassment and discrimination is common (Bishu et al., 2020; Feldblum & Lipnic, 2016). Further, a study of sexual assault and harassment in the US military estimated that 26 percent of active-duty women had experienced sexual harassment or gender discrimination in the past year, including almost five percent who had experienced one or more sexual assaults (Shaw, Hegewisch, & Hess, 2018, p. 3). Sexual harassment and assault negatively impact on women's careers and their social, physical, psychological and economic wellbeing (McLaughlin, Uggen & Blackstone, 2017; Sojo et al., 2016; Willness et al., 2007), and is linked to reduced performance, absenteeism, job dissatisfaction, turnover, and suicide (Griffith, 2019; Johnson, Widnall, & Frazier, 2018).

Workplace incivility has been defined as "acting in ways that violate norms of respect in the workplace" (p. 484) and marginalisation as "behaviors that demarcate people as different, excluded, or 'less than' others" (Dorrance Hall & Gettings, 2020, p. 485). Behaviours can range from subtle unintentional microaggressions arising from unconscious bias through to overt, intentionally malicious macro-aggressive acts. Women's experiences of incivility and marginalisation in male-dominated occupations includes being isolated from male co-

workers; being penalised for being too feminine and for presumably being too physically weak and punished for breaking gender norms; being scrutinized and over supervised, and having their ideas, contributions, credentials, qualifications, and experience discredited, discounted and ignored (Dorrance Hall & Gettings, 2020). Like sexual harassment, incivility affects women's physical, psychological and economic wellbeing and has a detrimental effect on turnover, absenteeism, job satisfaction and productivity.

2.1.2 Work-Family Pressures

The notion of the unencumbered ideal worker (Acker, 1990) that underpins the design of male-dominated industries and occupations is based on traditional male/female roles, where women are responsible for taking care of family and the home and men are responsible for financially supporting the family. Based on this image of the ideal worker, male-dominated occupations and industries often have long-hours work cultures with little attention to, or accommodation for family commitments (Lekchiri & Kamm, 2020). Instead, male-dominated organisations and industries have proved particularly 'unsupportive [with] "chilly" climates ... and organizational cultures" that ignore women's needs to integrate work and family responsibilities' (Dorrance Hall & Gettings, 2020, p. 486). The contradiction between the idealised unencumbered worker and long-hours work-cultures with women's family commitments and reproductive roles often prove problematic for women (Dorrance Hall & Gettings, 2020; Lekchiri & Kamm, 2020). These contradictions often result in women compromising between their family and work commitments (Bishu & Headley, 2020). For example, women with children have been found to decline promotional opportunities if this means an increase in hours, relocation or long commute times that would ultimately impinge on their family. Moreover, long hours, chilly climates and lack of family accommodation make it difficult for women to start a family (Germain, Herzog, & Hamilton, 2012) even resulting in some choosing to remain childless (O'Neil, Hopkins & Bilimoria 2008). Thus, for women, work and life decisions are intimately related.

2.1.3 Glass Metaphors and Organisational Barriers

Several glass metaphors have been developed to capture and describe the gendered organisational barriers women experience. These metaphors began with the theorising of the glass ceiling to help explain why women rarely achieve senior managerial positions. Glass metaphors have expanded to include glass walls, doors, cliffs and escalators, leaky pipelines, sticky floors, and revolving doors (International Labor Organization, 2004; Kerr, Miller & Reid 2002; Hultin, 2003; Ryan & Haslam 2007). Collectively, these metaphors capture women's organisational experiences in male-dominated industries and occupations in terms of their difficulty in entering (glass door), moving within (glass walls), moving up (sticky floors, leaky pipelines, glass ceilings), early exit (revolving doors), and promotion to risky senior leadership roles (glass cliffs).

Glass door barriers preventing organisational entry include perceptions that women are not suitable for the job, that customers or clients would not wish to deal with a woman, or that women's parental responsibilities would interfere with their work (Dorrance Hall & Gettings, 2020). Glass door barriers affect women's ability to secure job interviews and job offers despite their credentials meeting entry criteria. Sticky floor and glass wall barriers affect women's career progression and manifest in a variety of ways. For example, women are frequently hired into lower positions than comparatively qualified men; are held to higher standards and must work harder; have different access to role models, mentors, networks, training, and development; receive little or poor careers advice; and are tracked in to specific and often gendered aspects of the occupation (Bishu & Headley, 2020; Danbold & Bendersky, 2020; Dorrance Hall & Gettings, 2020; Germain, Herzog & Hamilton, 2012; Lekchiri & Kamm, 2020). Combined, organisational barriers manifest in women's slow or stalled career progress and difficulty in gaining access to more senior roles, as captured by glass ceilings; and, in some cases, in their leaving the occupation or industry, as captured by leaky pipeline and revolving door metaphors.

3 Theoretical Explanations and Responses

The literature offers a wide range of theoretical explanations about why women have these experiences in male-dominated industries. Many of these explanations are centred around either deficit models which focus on a perceived lack of skills or attributes or gendered social roles and stereotypes. More recently, intersectional analysis seeks to understand how points of difference interact to shape experience. This section briefly outlines these theoretical explanations and includes a review of individual and organisational responses to women's employment experiences.

3.1 Theoretical Explanations

3.1.1 Deficit Models

Deficit models focus on analysing the differences between men and women as explanations for women's over representation in a narrow range of industries and occupations (e.g., horizontal segregation) and their underrepresentation in senior roles (e.g., vertical segregation). From the deficit perspective, women's underrepresentation in male-dominated industries and occupations is explained by their lacking, for example, of essential prerequisite skills, credentials, and qualifications (O'Neil & Hopkins, 2015); self-confidence or self-efficacy (Dorrance Hall & Gettings, 2020; Kay & Shipman, 2014); and/or social capital and access to early-career socialisation, mentors, networks, and role models to gain access to, or to remain and thrive in male-dominated industries or occupations (Dorrance Hall & Gettings 2020; Lekchiri & Kamm, 2020).

3.1.2 Gendered Social Roles and Stereotypes

Gendered social roles and stereotypes are a set of theories that help explain the stereotyping of individuals within industries and occupations. Social Role Theory locates the development of gender roles and stereotypes to the beginnings of formalised society (Eagly, 1987; Eagly & Karau, 2002; Eagly, Wood & Johannesen-Schmidt, 2004). Eagly et al. (2004)

suggest that at this time, the physical differences between women and men contributed to the creation and division of gendered roles. That is, because men tended to be larger and stronger, they assumed social roles requiring strength, such as providing food and participating in conflict. In contrast, women's reproductive capacity confined them to the home, whereby they assumed the social roles of taking care of children and domestic duties (Eagly et al., 2004). Overtime, these divergent social roles based on binary understandings of sex, developed into gendered roles and stereotypes (Eagly, 1987), underpinned by shared expectations about the behaviours, skills and values that men and women should exhibit and possess (Eagly, 1987; Lemoine, Aggarwal, & Steed, 2016).

Gendered stereotypes similarly underpinned the development of the division of labour based on sex-typing of occupations and industries and a gendered hierarchy where men assume positions of status and power (Eagly et al., 2004). Characteristic features of male-dominated industries and organisations include having gendered hierarchies and wage gaps, biased performance appraisals favouring men and disadvantaging women; limited career development for women, being patriarchal and linking male traits to ideal leadership (Acker, 1990). The sex-typing of jobs and stereotypes of men and women, and of workers are often deeply held beliefs that rarely align with the actual skills or attributes required by a job. These contradictions are experienced by women in male-dominated industries in a variety of ways including being perceived as too weak to perform the job, lacking prerequisite skills, and being underqualified compared to their male counterparts. These sex-role and gendered stereotypes also have the effect of deterring women from entering male-dominated industries.

3.1.3 Intersectionality

The deficit and social role theories explain the differences in women's experiences in comparison to men and are therefore based on an assumption of a sex-based gender binary, and an assumption that all women have similar experiences. Hence, these approaches may not account for the differences in experiences between women. In contrast, Crenshaw's

(1989) development of intersectionality draws attention to the complexity and the compounding effect of sex, race, and class on women's lived experiences and employment outcomes. Intersectionality can thus help explain the inequalities "found within racial or gendered groups" (Harrison, 2017, p. 1026) and expose gendered, racial, and class-based hierarchies within organisational contexts. An intersectionality analysis can also shed light on why inclusive policies might not achieve the intended anti-discriminatory outcome for target groups.

An intersectional analysis is also helpful for questioning the male-female sex-binary that underpins gendered social role theories and to examine experiences of gender diverse people. To this end, there is a growing body of research examining the intersectional experiences of people identifying as gender fluid and as members of the LGBTQIA+ community (Das Nair & Butler, 2012; Few-Demo, Humble, Curran & Lloyd, 2016). Moreover, the expansion of male-female concepts reflects broader understandings of gender diversity, sexualities, and gender fluidity within the community and the more inclusive approaches to fundamental human rights (Human Rights Commission, 2010).

In addition to the interactive effects of class, race, sex (Crenshaw, 1989) and sexuality and gender diversity and fluidity (Few-Demo et al., 2016), intersectional analysis has expanded to include "other categories of difference in individual lives, social practices, institutional arrangements, and cultural ideologies and the outcomes of these interactions" (Davies, 2008. p. 68).

3.2 Proposed Strategies and Responses

Several individual and organisational strategies designed to address these gendered experiences and outcomes can also be found in the literature. Research tends to cover two broad themes of responses, those at an individual level, and those at an organisational level.

3.2.1 Individual Strategies

One of the most common responses to challenges faced by women in male-dominated industries is simply not to respond because women recognise that “speaking up either [does] nothing for them or would do nothing for them” (Dorrance Hall & Gettings, 2020, p. 495). However, research highlights active individual strategies and responses as including conforming to existing expectations, confronting existing norms, and finally leaving the situation.

3.2.1.1 *Conforming to Existing Expectations*

The response of conforming to existing expectations is premised on women learning to work within the constraints of the organisational environment and not directly challenging the norms in this environment. For example, some women conform to existing expectations by changing their own aspirations, altering their behaviour to appear more masculine, ignoring “inappropriate behaviour” and following explicit instructions to “play the game” (Dorrance Hall & Gettings, 2020, p. 496). Smith (2013) found that some lesbian women “play the game” by learning the gendered language and behaviours associated with objectifying and sexualising other women to ensure male colleagues “do not walk all over you” (p. 599). Objectifying and sexualising women is especially practiced in construction (Watts, 2007; Paap, 2006) and is considered a common way to deter women from entering male-dominated occupations and industries (Kanter, 1977; Watts, 2009). Thus, learning to objectify and sexualise other women can be a particularly uncomfortable experience.

Other strategies that do not challenge existing expectations are to seek mentors from within the organisation who can help navigate and teach the norms required to achieve within that context and to develop social capital by joining inter- and intra-organisational networks.

3.2.1.2 *Confronting Existing Norms*

In contrast, research has also found that some women in male-dominated industries respond to gendered experiences by confronting existing norms. This includes highlighting the importance and value of using stereotypically feminine skills, such as communication and empathy, for challenging male norms and for achieving organisational outcomes (Campuzano, 2019; Elliot & Stead, 2018; Shaked, Glanz & Gross, 2018). These efforts have been helped by the growth in research highlighting the ‘female leadership advantage’ (Crites, Dickson & Lorenz, 2015; Padgett, Caldwell & Embry, 2008). In addition, women confront norms within male-dominated industries by questioning and seeking changes to organisational policies to enhance inclusivity of women. For example, challenging the norms around a standard workday, to align to family responsibilities. Other forms may be more direct, such as ‘calling out’ colleagues for inappropriate behaviour, jokes or language, or by making complaints to senior managers about instances of inappropriate behaviour.

Another set of strategies evident in the literature that women use to confront norms is to gather support to counteract some of the challenges faced in male-dominated industries (Bishu & Headley 2020; Campuzano, 2019; Dorrance Hall & Gettings, 2020; Lekchiri & Kamm, 2020; Write 2016). For some, this involves gaining support from other women by joining industry organisations, or industry women’s networks. For others, this is less formal, and involves building friendships with other women in the industry. Support is also gathered from wider family members, including their spouse, children, and parents, to help with balancing work and life commitments within the context of working norms that may not usually support this balance. Finally, researchers also document women in male-dominated industries gathering support from bystanders when encountering toxic work cultures and behaviours, and during incidences of bullying and harassment.

3.2.1.3 *Removing Themselves*

A final theme within the individual responses, is research that finds women simply remove themselves from the situation in response to challenges they face (Dorrance Hall & Gettings, 2020; Germain, et al., 2012; Smith, 2013). There are many ways that this might manifest, but include physically moving their work desk or location, making themselves less visible within the workplace, or not attending work-associated social functions. There is also evidence of women leaving their job altogether, some moving to start their own business within the industry (rather than continue to deal with the working context), or indeed leaving the industry. There is also evidence of some women dressing differently, or gaining weight to become less 'visible', particularly in situations where sexual harassment has been a feature of their experience.

3.2.2 Organisational Strategies

Research focusing on organisational responses to the challenges faced by women in male-dominated industries largely focus on either looking to change aspects of organisational culture, or to support women to meet expectations. In terms of challenging the norms and affecting cultural change, some organisations work to “reframe the jobs and work to align with what is actually done” (Danbold & Bendersky, 2020, p. 119). For example, oftentimes the norms of job requirements in male-dominated industries emphasise skills such as physical strength, whereas the range of tasks performed within that role might be far more nuanced than these stereotypes portray. Other organisational responses to impact culture change include having policies and processes around diversity and inclusion, and harassment and bullying. Organisational responses that aim to support woman to achieve within the current context include providing women with information about development and career opportunities, introducing mentoring and support networks, and providing career planning tools and resources.

4 Women in Fire and Emergency Globally

4.1 Introduction: Gendered Nature of Fire and Emergency Services

As previously discussed, researchers have long recognised a gendered division of labour within society and consequently in many industries, underpinned by societal gendered role stereotypes. These stereotypes are reflected within Fire and Emergency Services globally. In particular, the binary-sex based stereotypes and norms dominate previous research in Fire and Emergency services, with few studies taking an intersectional approach. These stereotypes associate women with caring, motherhood and domestic duties, and men with technical and physical skills. It is well documented that public services have binary-gendered underpinnings (Sabharwal, 2015), in that they are “socially constructed, designed by, and run for particularly the benefit of men, especially those identifying as cis-gendered ... and heterosexual” (Bishu, McCandless, & Elias, 2020, p. 1). Indeed, this report highlights a limitation in the previous research, which also neglects to highlight the experiences of the wider gender diverse and LGBTQI+ workforce. This binary gendered construction is also found to be evident in emergency services, and in particular in firefighting and policing (Bishu et al., 2020). The job design, as well as organisational norms and culture are masculinised, in that women are often seen as physically unfit for these roles, or even for the organisation as a whole (Bishu et al., 2020).

The gendered construction of occupations is reflected in horizontal segregation within the fire and emergency services, as seen in other male dominated industries. Horizontal segregation is when the workforce of an industry or sector is predominantly made up of one particular gender and if there is a disparity in the distribution of responsibilities between genders (Sadigh, Duszak Jr, Macura, & Rosenkrantz, 2020). Firefighting is widely perceived as a male occupation (Beatson & McLennan, 2005; Brough & Smith, 2002) and although the representation of women has risen in other male-dominated industries, women remain underrepresented within firefighting in both paid and volunteer positions (Bishu et al., 2020; Gouliquer, Poulin, & McWilliams, 2020). Internationally, an estimated

10% of firefighters are women, and in comparison, approximately 15% of New Zealand fire fighters are women (Brushlinsky, Ahrens, Solokov, & Wagner, 2021).

The gendered nature of fire and emergency services is also reflected in vertical segregation and the lack of women in leadership positions. Vertical segregation denotes a situation where opportunities for career progression for a particular gender within a company or sector are limited (Meulders, Plasman, Rigo, & O'dorchai, 2010). Gendered organisational processes are apparent in firefighting as women are often absent from key decision-making roles; concentrated in lower-ranked positions, in traditionally feminine roles, in specialised units, or even the only woman in a unit; unable to access professional opportunities for advancement; and encounter barriers to professional development opportunities, thus experiencing occupational closure (Bishu et al., 2020). The way in which work is designed, resources are allocated and jobs are structured reinforces gendered expectations, especially when motherhood and caregiving responsibilities provide a challenge to women participating fully in organisational operations, roles and decision making (Bishu et al., 2020; Sabharwal, 2015).

Within the Australian context, men continue to “predominate in positions of power, and fire-fighting organisations uphold culturally dominant ideals of masculinity within the workplace and leadership Entrenched gendered behaviours and expectations continue to prevent women taking leadership roles” (Parkinson, Duncan, & Archer, 2019, p. 81). Successful enactment of leadership in emergency management aligns with characteristics of masculine stereotypes traits, such as being competitive and assertive. The emergency management culture has historically “reward[ed] a ‘command and control’ style leadership in which males communicate through bravado and confidence ... shored up by Australian mateship culture” (Parkinson, Duncan, & Archer, 2019, p. 8). The latter refers to the ‘blokey’ culture often present within fire services, where male fire-fighters swear, watch pornography, are threatening through language and behaviour, and operate an exclusionary

group dynamic, where women are often excluded from both social events and professional opportunities such as training (Ainsworth, Batty, & Burchielli, 2014; Parkinson et al., 2019).

Fire and emergency services worldwide are facing scrutiny over a lack of workforce diversity, with many facing legislative or regulatory mandates to address the issue (Andrews & Ashworth, 2018). In some cases, this has been driven by complaints of sexual harassment and bullying in the workforce (MacDonald, 2019, p. 2). As Brough and Smith (2002) note, for services that are highly professional in offering equality in their services to community, this equality appears to be more fiercely resisted within the organisations themselves. These concerns over the gendered and discriminatory nature of fire and emergency services are not new. For example, the 1999 HM Inspectorate Report suggested that the UK Fire Services was ‘institutionally sexist’ and identified the common harassment behaviour women were subjected to (HM Fire Services Inspectorate, 1999).

This continued gender disparity within fire and emergency services raises ethical concerns at a professional and organisational level, “the former concerning whether such professions make gender equity ethical priorities and the latter focusing on whether agencies are diverse and inclusive” (Bishu et al., 2020, p. 2; Parkinson et al., 2019). In the following sections, the research discussing the global experiences of women in Fire and Emergency Services are reviewed, alongside international initiatives to respond to the challenges faced.

4.2 Gendered Experience within Fire and Emergency Services

4.2.1 Issues and Barriers Experienced by Women

Over the years, studies have identified a number of challenges for women within fire and emergency services, including a hostile environment, sexual harassment, discrimination, lack of flexible working arrangements, and those posed by the physical environment and equipment. These challenges are discussed here.

4.2.1.1 Hostile Environment

Studies conducted in several national contexts reveal that fire and emergency services are a hostile working environment for women (Batty & Burchielli, 2011; Bishu et al., 2020). In a recent study of Canadian women fire fighter experiences, Gouliquer et al. (2020) describe this hostile work environment as characterised by “repeated adverse verbal (e.g., insulting remarks, ridicule, teasing, verbal abuse, degradation of one’s effort and work) and physical acts (e.g., isolation, social exclusion)” (p. 57). Some of this behaviour was not just experienced as ‘unpleasant’ for women but came with a sense of threat and fear (Gouliquer et al., 2020). These and similar verbal and physical acts were echoed in other studies focused on women firefighters in different countries (Hulett, Bendick Jr, Thomas & Moccio, 2007).

Studies focused on the Australian experience, for instance, mention the negative and hostile social behaviour of male brigade members towards women fire fighters, including workplace bullying and harassment, discriminatory behaviour (discussed below) and offensive, debasing language (Ainsworth et al., 2014; Batty & Burchielli, 2011; Beatson & McLennan, 2005). For example, women are frequently called “bitch,” “whore,” or “troublemaker” (Gouliquer et al., 2020; Yoder & Aniakudo, 1996). This kind of language and ‘teasing’ would be considered offensive and inappropriate in most other professional settings, but within the fire and emergency setting is often couched as ‘a joke’, posing a challenge for women to address the behaviour, without being seen as ‘not a team player’ (Wilson & Scanlen, 2016). Batty and Burchielli’s (2011) study of women volunteer firefighters in Victoria found that “standards of appropriateness were represented as contested terrain, and participants noted there was no agreement between the genders about the need for change, nor the drivers of change” (p. 316).

In addition, women firefighters report being regularly excluded from day-to-day interactions, given the “silent treatment” or left behind at the fire station during emergency calls. Yoder and Berendsen’s (2001) study of white and black women within the US fire service found that male firefighters heightened group boundaries through ‘silent treatment,’ reminding the women of their subordinated positions and exclusion from the dominant group. Gouliquer et al. (2020) refers to this as ‘othering:’ “a process that uses exclusionary criteria based on undesirable characteristics between two or more groups to discriminate” (p. 50). In Batty and Burchielli’s (2011) study, women reported a sense of ‘otherness,’ which came “both from being excluded, as well as from being seen as different to the norm: alien and trophy-like.” Women also described conflicting feelings about the need to change or not belonging (Batty & Burchielli, 2011). Feelings of isolation due to a lack of women co-workers were common too (Gouliquer et al., 2020; Yoder & Berendsen, 2001).

4.2.1.2 Sexual Harassment and Assault

As part of a hostile work environment, studies that span over 20 years repeatedly refer to the experience of sexual harassment and even sexual assault within fire and emergency workplaces (Ainsworth et al., 2014; Hulett et al., 2007). Further, Beatson and McLennan (2005) note that “benevolent” sexism (such as paternalistic overprotection) and hostile sexism (such as sexual harassment) are regular occurrences within firefighting workplaces globally, and that such occurrences are “potential impediments to the retention of female fire fighters” (p. 22). This is not a new issue. The UK Fire Inspectorate found sexual harassment accounts in every brigade sampled (HM Fire Services Inspectorate, 1999), and unpublished data from a 1995 US survey indicate that 90% of paid and 76% of volunteer firefighter women surveyed experienced one or more forms of sexual harassment (Women in the Fire Service, 1996). In their US study, Rosell, Miller, and Barber (1995) found that over half of the women firefighters surveyed had experienced sexual harassment. Beatson and McLennan (2005) point out that “findings from research on sexual harassment in the US and UK fire services are indicative of an organisational culture in which such behaviour is tolerated” (p. 22). More recently, and closer to home, Batty and Burchielli’s (2011) study reported sexual objectification and sexual harassment among Australian female fire fighters,

and in a review on New Zealand fire fighters, Wilson and Scanlen (2016) highlighted sexual harassment as a retention barrier.

Reporting sexual harassment and assault is, however, challenging (Hulett et al., 2007), and issues with reporting instances of harassment and discrimination was a recurring theme in previous research. Gouliquer et al. (2020) found that while many women do not report sexual harassment or sexual assault “for fear of being disbelieved and ostracized by their colleagues and the fire services’ administration, [therefore] women kept quiet about the harassment and sexual assault with the hope that the situation would change” (p. 57). Under-reporting is not new, for example Rosell et al. (1995) revealed that almost 60% of those who had experienced sexual harassment, did not report it. For those who did report it, in more than two thirds of the cases, the fire departments failed to take formal action in response to the complaint, regardless of how inappropriate the behaviour was. A special report by the US Equal Employment Opportunity Commission in 2018, focused on harassment in the workplace in general. They found that the percentage of those filing complaints tends to be low, with only 6-13% filing a formal complaint (Shaw et al., 2018). The main reasons mentioned were disbelief, perceived inaction to a complaint, fear of being blamed, social retaliation and professional retaliation. The study also revealed that these fears are well-founded, with 75% of those filing formal complaints reporting some form or retaliation. Batty and Burchielli (2011) found various organisational procedural issues around the reporting of sexual harassment, including an unacceptably long response time before any action, or a lack of confidentiality around the complaint. Victim ridiculing was also reported as a regular occurrence (Batty & Burchielli, 2011). Other studies found that reporting of sexual harassment is often followed by indifference or trivialisation of the complaint as well as hostility and reprisals against the victim (Bergman, Langhout, Palmieri, Cortina, & Fitzgerald, 2002). Significantly the HM Fire Services Inspectorate (1999) found that *all* women who filed official complaints for sexual harassment subsequently quit the service, is perhaps a reflection of these reporting and handling issues.

4.2.1.3 *Discrimination and Stereotyping*

Discriminatory behaviour and stereotyping are embedded in hostile work environments. Women firefighters experience discrimination during the recruitment process and throughout their career (Gouliquer et al., 2020). Hulett et al.'s (2007) study of female fire fighters in the US found that almost 85% experienced different treatment because of their gender. Parkinson et al.'s (2019) study among fire and emergency staff in Victoria, found that one-third of respondents reported being aware of discrimination against women in the workplace. Interestingly, more than twice as many women than men reported this awareness and more than a quarter of the women respondents reported personal experiences of gender-based discrimination.

Research suggests that job descriptions and formal requirements, such as physical entrance tests in fire services, discriminate against women. Women are treated and viewed as if they are not capable of doing the job (Gouliquer et al., 2020). Women reported feeling trivialised, unacknowledged, overlooked, instructed to undertake 'mindless' tasks, given little responsibility, and in some cases, having apparatus withheld due to a perception that they were technically and physically incapable (Batty & Burchielli, 2011, p. 316; Hulett et al., 2007).

Aligned to a gender role perspective, studies also report women's frustrations about the assumptions surrounding which tasks women should take on (Parkinson et al., 2019). As one female respondent in the Parkinson et al. (2019) study explained: "I would take on a fire and emergency role if only ... those who decide what training/deployments you can go on would listen to what my skills and interests are. Because I'm a female, it was assumed I'd work in logistics. I'd rather gnaw my arm off" (p. 85). Women reflected on "the stereotype of male fire-fighters and questioned the relevance in a modern emergency service organisation with team work and technology" (p. 86). Something which was echoed in other studies, which suggested that formal requirements and assessments are not necessarily a reflection of the 'modern' firefighter role (Batty & Burchielli, 2011; Hulett et al., 2007)

Studies also show women fire-fighters being scrutinised and supervised more closely, feeling the need to prove themselves continually, and being required to outperform their male colleagues (Ainsworth et al., 2014; Batty & Burchielli, 2011; Mossman & Mayhew, 2008; Parkinson et al., 2019; Yoder & Berendsen, 2001). “While many women firefighters do have the physical abilities to succeed as firefighters [they] ... nonetheless experience[d] excessive, unrelenting scrutiny and skepticism” (Bendersky, 2018, p 3).

There is also evidence that this increased scrutiny remains as women progress through the ranks. Parkinson et al. (2019) reported that when women make “inevitable human mistakes” it is attributed to their gender; yet this gendered reasoning “is never applied to men in leadership positions” (p. 87). Glass walls and glass ceilings, in terms of career progression, are regularly mentioned in studies as an outcome of increased scrutiny and discriminatory behaviour. Mossman and Mayhew (2008), in their study of the New Zealand Police force, report that women experience structural discrimination through being offered fewer and narrower opportunities, and are often given ‘feminine roles’ which have ‘lower’ status and limited promotional opportunities. Wilson and Scanlen (2016) similarly report that “women tend to be provided with fewer deployment experiences, which subsequently inhibit them from being able to move up the ranks Women working in non-combat or operational support roles have restricted ability to access and play a role in top leadership structures in the NZDF”. In the US, women firefighters similarly mention “disparities in training and assignments which affected their promotional opportunities. Denial of access to classes and equipment to train for certification and promotional exams was a common theme” (Hulett et al., 2007, p. 201). Parkinson et al. (2019) found that alongside women experiencing unfair career progression, men received favouritism as “evidenced by selective fast-tracking ... being assessed at a lower standard and sometimes being given accreditations because their skill was needed” (p. 87). They further note that, “it was apparent that women’s career prospects relied on the subjectivities of their manager” (p. 86).

While being elected into the officer ranks was reported as “extremely difficult”, once there, women find new forms of “trouble”, including some men not liking “taking orders from a woman” (Batty & Burchielli, 2011, p. 318). Batty and Burchielli (2011) further note that due to the lack of women on governing boards, participants suggested that it was difficult to have equal representation of gender and especially when existing boards consisted of older men who trivialise women’s concerns (p. 318). This lack of women in leadership positions acts as another barrier for career progression of other women (Batty & Burchielli, 2011).

4.2.1.4 Lack of Flexible Work Arrangements

Existing studies highlight issues for women in terms of working time and work-life balance, in particular combining the firefighter role with the care giving role (McLennan, Birch, Beatson & Cowlshaw, 2007). While the irregular hours and shift work play a role in this (Batty & Burchielli, 2011), studies highlight a lack of accommodation for pregnancy or care-giving and parenting duties within fire brigades. More recently, Gouliquer et al. (2020) found that women faced discrimination while pregnant, and that while “[c]areer women firefighters are protected by formal workplace legislation for pregnancy and maternity; ... they had issues with not being given meaningful light duties during their pregnancy” (p. 56). In fact, “women who exhibited ‘undesirable’ characteristics, such as those associated with femininity, pregnancy, motherhood, smaller stature, appearance, or strength/weakness, were Othered by their men colleagues through the use of gendered and psychological violence” (p. 64).

In the same vein, Parkinson et al. (2019) showed that in the Australian context, female fire fighters experienced higher career penalties associated with having children compared to their male counterparts. Women described returning to a changed workplace with little support and a loss of status: “One was refused training in a new communication system on her return to work. A[nother] participant told of her senior female manager who had to

fight to retain her accreditation after 12 months maternity leave, whereas a male colleague had a hip replacement around the same time and did not face the same penalty upon his return to work” (p. 88). Participants further spoke of part-time and flexible work being considered problematic and signifying a lack of commitment. They conclude that pregnancy and care of family remains a barrier primarily for women. This lack of accommodation (if not discrimination) is a further barrier in career progression, in particular when “caregiving disqualifies them from engaging in important organizational operations” (Bishu et al., 2020, p. 6; Sabharwal, 2015).

4.2.1.5 Physical Environment

In addition to difficulties within the social environment, women fire fighters face difficulties with aspects in the physical environment, ill-fitting protective gear and inadequate fire station facilities (Beatson & McLennan, 2005; Hulett et al., 2007). For example, Gouliquer et al., (2020) point out that most of the “tools, equipment, and techniques ... [and the] ... firefighting environment” are designed by men to accommodate men’s “height, strengths, and techniques” (p. 61). Further, the increased sizing of fire-fighting vehicles has resulted in some women having difficulties getting in to the trucks and reaching for equipment inside the trucks (Batty & Burchielli, 2011). Yet, prior studies report a lack of response to these design issues by fire departments or brigades (Beatson & McLennan, 2005).

Ill-fitting protective gear, including gloves, pants, helmets and boots, are uncomfortable and constitute a significant constraint for women to work safely and functionally (Batty & Burchielli, 2011; Hulett et al., 2007; McQuerry, Kwon, & Johnson, 2019). Recent studies highlight that ill-fitting gear can cause ongoing health concerns for women and increase risk of onsite injury (McQuerry et al., 2019; Watkins, Walker, Mol, Jahnke, & Richardson, 2019). Personal protective clothing and heavy equipment designed for the typical male body may cause stress on the female body (McQuerry et al., 2019), with the weight of personal protective equipment and breathing apparatus, and restrictive boots increasing the occurrence of musculoskeletal injuries (Watkins et al., 2019, p. 428). Yet, prior reports show

some brigades refusing to purchase small sized personal protective clothing, or are even unaware that smaller sizes can be purchased (Beatson & McLennan, 2005). Beatson and McLennan (2005) suggest that given the long-term persistence of this issue, ill-fitting gear might be interpreted as another manifestation of organisational cultural intolerance of women.

With regard to fire station facilities, the lack of provision of separate toilets, showers and changing rooms is reported in most studies. The UK HM Fire Services Inspectorate (1999), for instance, found this was a problem in all the brigades sampled. The lack of these facilities leads to both privacy and health concerns for women, which in turn create daily stress. The international study by Watkins et al. (2019) found that the lack of suitable toilet facilities was commonly referred to by participants as a hygiene concerns and in relation to gynaecological health. Related issues of privacy and stress were also reported in relation to having nowhere to get changed. The lack of suitable toilet facilities can be an issue on site at emergency call outs. For example, Batty and Burchielli (2011) found that in response to the expectation to “urinate ‘behind a tree or behind a truck’”, some women monitored fluid intake to avoid the necessity of going to the toilet, thus causing dehydration and especially at long fire call outs and on hot days (p. 318).

These issues and barriers experienced by women firefighters lead many authors to conclude that women fire-fighters are significantly challenged and structurally discriminated against through individual, social and organisational behaviours (Batty & Burchielli, 2011; Wilson & Scanlen, 2016). Indeed, as Batty and Burchielli (2011) point out, women in firefighting experience barriers and challenges that are related to job design and work processes that manifest in specific health and safety concerns, and poor access to training and development, work-life balance, fair remuneration, and promotions. They conclude that the combination of these create “a negative experience of [firefighting] ... which may have prevented other women’s involvement in it” (p. 321).

4.2.2 Complexities and Paradoxes of Women Firefighters

Women's experiences in fire and emergency are replete with complexities and paradoxes. This is especially apparent in the way that women perpetuate the very same male norms that are often experienced as barriers to women, and in the way that masculine cultures can be experienced as both barriers and enablers to women's success in fire and emergency services.

4.2.2.1 *Perpetuating Masculine and Disparaging Feminine Norms and Behaviours*

Women in fire and emergency services have been found to adopt masculine norms and behaviours, distance themselves from other women and to confirm feminine stereotypes as methods to fit into fire and emergency services and to cope with and be accepted by male colleagues. For example, in attempts to become the ideal firefighter, women have been found to display the same behaviours, language and capabilities as men (Parkinson et al., 2019). Similarly, Gouliquer et al. (2020) found women adopting a variety of cognitive and behavioural coping strategies to negotiate the various barriers and challenges (as presented in Section 3) in their efforts to fit in to Canadian fire and emergency services. A common cognitive strategy was to deny any negative impact arising from physical or verbal abuse or harassment. Behavioural strategies revolved around proving themselves as capable as men. For example, by adjusting work processes and techniques to ensure task accomplishment. Many women also engaged in strength training and "centered their lives around the gym to improve their strength and to avoid being labeled with the weaker sex stereotype" (Gouliquer et al., 2020, p. 61). Moreover, they found that women's expression of pride was entangled with feelings of "doing well as a *woman* in a men-dominated occupation instead of just doing well" (p. 61).

In their research, Parkinson et al. (2019) found women participants expressing both admiration for and disquiet about other women in fire and emergency services. Admiration was expressed for the women who first entered fire and emergency services and broke the

ground for the next generation of women. At the same time, participants expressed their disquiet about the women who they perceived had adopted masculine traits. The participants explained that they accepted adopting masculine traits might be necessary to gain promotion. However, they saw tensions arising from the women who they perceived had fought to become one of the boys on their way to the top, adopted “masculine leadership styles”, had succeeded “on men’s terms” and/or enjoyed “working in a male environment” (p. 88). The participants describe that some women who had succeeded within the current structures were not inclined to challenge or change current structures, nor did they seem interested in supporting or mentoring younger women; rather they appeared to be ‘kicking down the ladder.’ Reflecting on these findings, Parkinson et al. (2019) reference the notion of the queen bee phenomenon proposed by Derks, Van Laar, and Ellemers (2016) “whereby women leaders assimilate into male-dominated organizations ... by distancing themselves from junior women and legitimizing gender inequality in their organization” (p. 456). Interestingly, Derks et al. (2016) note that this reflects similar behaviour from individuals from other marginalised populations, and that it should be seen as a consequence, rather than a cause, of discrimination.

Finally, Batty and Burchielli (2011) found that feminine stereotypes negatively affected women’s participation in the brigades and that “dominant stereotypes about women influenced the expectations of male colleagues relating to women’s cognitive and physical abilities” (p. 320). At the same time, they found that women ascribed to and identified with gendered stereotypes of women possessing “qualities of caring and helping, as well as with notions of women’s ‘bitchiness’” (p. 320). Thus, women do not necessarily challenge the ‘femaleness’ of these traits, and unconsciously supported their existence.

Adopting cognitive and behavioural strategies and upholding gendered stereotypes as ways to gain acceptance and a sense of inclusion make sense at the individual level. However, these strategies do little to challenge the gendered nature of the fire services and hence “undermine their own presence in the midst of fire services” (Gouliquer et al., 2020, p. 60).

An awareness of these paradoxes, as well as an understanding of 'why' they exist, will be an important part of deepening the understanding of women's experiences within fire and emergency services.

4.2.2.2 Culture as Both Cause and Enabler

Paradoxically, the strong organisational culture that is a significant cause of women's negative experiences in fire and emergency services is also one of the reasons that attract and retain women in fire and emergency services, and is an avenue for creating positive change in fire and emergency services (Malinen, Algera, & Mankkinen, 2019; Wilson & Scanlen, 2016). That is, international research on gender and diversity in fire and emergency services suggests that the organisational culture of these services is an important driver of negative social behaviour (Parkinson et al., 2019). In turn, this negative social behaviour of brigade members, including debasing language and discriminatory behaviour, is one of most significant barriers for women to remain in the fire service (Ainsworth et al., 2014; Batty & Burchielli, 2011). At the same time, studies suggest that the culture within fire brigades is being experienced as positive, encouraging and supportive by women, and plays a key role in retaining women in the service (Branch-Smith & Pooley, 2010; McLennan et al., 2007). For instance, in a study of Finnish volunteer firefighters (Malinen et al., 2019), the women participants reported social reasons, related to the social experience and culture within the brigade, as the most important reason for staying.

This contradiction suggests that while negative experiences require research in terms of retaining women, positive experiences and the generally positive elements of fire brigades for women may also be of value to investigate further (Branch-Smith & Pooley, 2010; Malinen et al., 2019). It may be important to further unpack the different elements of organisational culture within fire services and how organisational strengths can be used to overcome diversity-related barriers (Wilson & Scanlen, 2016).

4.3 Suggested Pathways to Change

Over the years, studies have offered a variety of initiatives and strategies towards positive change for women within fire and emergency services. This overview does not attempt to be exhaustive but aims to highlight the main pathways to change that are suggested within the current research.

4.3.1 Recruitment Initiatives and Processes

Quotas and targets are a recurring suggestion within the literature. “Quotas ensure sustained and systematic recruitment of women and, over time, lead to the normalisation of female firefighters” (Mackintosh, 2018, p. 18). Mackintosh (2018), whose research included 21 fire departments in eight countries, found that the fire services with the highest percentage of women in their ranks used quotas and gender targets.

The use of quotas and gender targets to enhance the number of women in general, as well as those in leadership, is, however, a contentious issue (McLeod & Herrington, 2017). While quotas and targets have been attributed to a higher proportion of women in some fire services, its use is challenged by those within the service. As MacDonald (2019) explains in an earlier FENZ report, “Quotas contribute to a perception that increasing diversity dilutes the professionalism of the firefighter role; that women, and those from other under-represented groups, receive special treatment, that they are not ‘the best for the job’ ... and that ‘good blokes are missing out’ because of this” (p. 5). Women fear resentment and retribution from male colleagues, and that “any attempts by management to fast track or nurture women for leadership roles would lead to scepticism about the capability of women in senior roles” (Parkinson et al., 2019, p. 90).

If the negative consequences of quotas and targets are not to undermine the ultimate goal of achieving a diverse and inclusive fire service (MacDonald, 2019), they have to be

administered without compromising performance standards (Mackintosh, 2018). In addition, transparency around the use of quotas and targets is of key importance, and “agencies should ensure robust communication and performance-management plans are in place before implementing quotas” (p. 19). Parkinson et al. (2019) further suggest the implementation of strategies to fast-track or recruit a 50/50 gender split in executive teams so attracting women is not seen as tokenistic.

Targeted recruitment and social-change programs (e.g. programmes or camps for young people) are mentioned as important add-ons to the use of quotas (Mackintosh, 2018). These approaches aim to create clarity and understanding around the requirements and opportunities of the fire fighter role, but also normalise the social perception of firefighting as a role that woman can do.

In terms of the recruitment process, studies emphasise the need for fairness and transparency for “consistent expectations and evaluation processes for establishing members’ competence and trustworthiness” (Bendersky, 2018, p.5). Hiring policies and practices should therefore be focused on the assessment of skills and merit, and reviewed and monitored closely with equity and fairness principles in mind (Gouliquer et al., 2020; Parkinson et al., 2019). There has to be a concerted effort to eliminate (un)conscious bias and structural barriers to the recruitment of women; this relates to written and physical evaluation and assessment processes, but also to, for instance, the composition of interview panels (MacDonald, 2019).

4.3.2 Reframing the Firefighter Role

Currently, there is a misalignment between the perception of what the firefighting job entails and what fire and emergency services actually do. For example, in the US, less than 4% of fire and emergency work is for fire call outs compared to 64% for medical emergencies (Bendersky, 2018). Similar trends are evident elsewhere in the world due to

the evolving role of fire and emergency services. Being a firefighter is no longer primarily about “fighting fires”; instead fire and emergency services also engage in medical responses and liaise with diverse communities for “planning, preparedness and risk reduction” (MacDonald, 2019, p. 4). The expansion of the firefighting role requires fire and emergency personnel to possess a range of “physical ..., intellectual, social, and emotional skills” (MacDonald, 2019, p. 4). Despite the increasing importance of a diverse skill set, evaluating the competence of current and future firefighters still seems to default to a narrow focus on physical “strength evaluated through strict fitness tests” that tends to maintain the demographic composition of the current workforce (Bendersky, 2018, p. 5). Thus, there are calls to change the awareness about and ‘professional prototype’ of the firefighter role to better reflect the actual skillset required by fire and emergency personnel (Batty & Burchielli, 2011; Bendersky, 2018; Gouliquer et al., 2020).

To support this change in perception, there is a need to ensure that “accreditations and assessments for progress are relevant to modern fire-fighting and emergency management demands” (Parkinson et al., 2019, p. 90). Again, these changes need to be accompanied by clear and consistent communication that this is not a reflection of the dilution of the firefighter role but is based on merit and competency to perform the modern fire fighter job (Parkinson et al., 2019).

Creating a better understanding of the modern firefighting role is important from a recruitment and job expectations perspective. Reframing what it means to be fire and emergency personnel offers an opportunity to emphasise and legitimise the importance of stereotypically feminine traits, like compassion and care (Batty & Burchielli, 2011; Bendersky, 2018). Such a realignment has the potential to support diversity strategies and to create a more inclusive environment. Danbold and Bendersky (2018), for instance, showed that by emphasising the importance and legitimation of feminine-stereotyped traits, alongside masculine ones, increased the perceived ability of women firefighters. At

the same, this recognition and legitimisation process did not increase the opposition of the male firefighters towards their female counterparts.

Such reframing, however, must avoid perpetuating gendered expectations by assuming that women take up, or are relegated to, roles requiring care and compassion and stereotypically defined as feminine, and men assuming roles requiring strength and stereotypically defined as masculine. Gouliquer et al. (2020), for instance, found this gendering in fire and emergency services with women being “encouraged and pushed into the caring and nurturing role” and men resisting work that was perceived as feminine or that involved “women victims” (p. 62, 63).

4.3.3 Adjusting Gear and Work Arrangements

Some obvious suggestions for improvement relate to adding facilities for women and adjusting gear and equipment to the female form. For instance, “to minimize the physical load, and reduce musculoskeletal injury rates, lighter weight, well-fitting specific clothing and alternative boots should be considered” (Watkins et al., 2019, p. 428). In addition, Parkinson et al., (2019) mention the need to create increased flexibility within fire services to facilitate work-life balance for both women and men personnel. Suggestions include: the review of maternity and paternity provisions (with a focus on providing support while on leave and upon return); support flexible and part-time roles through advocacy and communication from managers at every level (e.g. that part-time work is equally valuable to the organisation to full-time work); and increased flexibility and agility when it comes to rostering (through modern software applications and objective allocation by those organising rosters) (Parkinson et al., 2019). According to Parkinson et al. (2019), it is of key importance to “eliminate assumptions that people will or will not be available for work based on sex, family responsibilities and perceived commitment” (p. 90).

4.3.4 On-The-Job Support and Leadership Development

Studies mention a number of approaches to support women while on the job and that help to progress their careers. In terms of on-the-job support, the literature highlights the need to develop clearly-defined, fair and confidential complaints and dispute-resolution processes, where women and men feel safe to raise issues about discrimination or harassment concerns (Batty & Burchielli, 2011). To create safe work environments, Gouliquer et al. (2020, p. 65) suggest “a zero-tolerance policy ... [for] verbal (e.g., derogatory remarks) [and] physical (e.g., unwanted physical contact, sexual assault)” harassment (p. 65). They argue that to be effective, zero tolerance policies must clearly define consequences for harassment, monitor harassment complaints, support victims, report cases to a national fire service body, and provide an external complaints procedure to improve confidence in and use of reporting systems. In a related vein, fire and emergency services could improve health and safety practices and processes that consider, and address, female- specific health and wellbeing needs (Batty & Burchielli, 2011; Watkins et al., 2019).

In terms of helping with career progression, support could take the form of structured mentoring or sponsoring systems that pair-up women who are new recruits with more senior, experienced and respected women and men (Bendersky, 2018; Parkinson et al., 2019). In terms of leadership development support, there is a need to improve the accessibility and quality of leadership training and development for women (Mackintosh, 2018). One suggestion is to release young women for leadership training in their early years to help kickstart their leadership career (Parkinson et al., 2019).

4.3.5 Impact of Leadership and Culture: Need for an Integrated Approach

In isolation, however, the initiatives described so far are unlikely to have a lasting impact on addressing women’s negative experiences, changing the gendered profile, or diversifying fire and emergency services personnel. This is because many of the experiences and

outcomes of women are structural and systemic and embedded in cultural practices (Batty & Burchielli, 2011). Therefore, a multifaceted, holistic approach is needed to effect positive lasting change. Such ambitious change is more likely to be successful when underpinned by a review of existing organisational policies, physical amenities, and culture and supported by the senior leadership team (Gouliquer et al., 2020; Hulett et al., 2007).

For instance, diversity recruitment can only succeed when incorporated as part of a multi-faceted diversity and inclusion strategy underpinned by effective change mechanisms (MacDonald, 2019; McLeod & Herrington, 2017). That is, to increase retention, avoid leaky pipelines, and benefit from a diverse workforce, recruitment strategies must be supported by policies and practices that help new recruits feel safe, and that integrate and include them in to the fire and emergency service environment (MacDonald, 2019). As this relates to women, recruitment initiatives and internal support systems should reflect clear organisational values (MacDonald, 2019). Despite many fire and emergency services pursuing cultural change and diversity in recruitment and promotions; this does not seem to address inclusion, and the feeling of “being valued and having a sense of belonging, regardless of who you are” (Bendersky, 2018, p. 4).

Changing existing fire and emergency cultures to better recognise that people from diverse backgrounds are capable across job roles and levels and are inclusive will require a long-term commitment and clear and consistent communications from top leadership (Bendersky, 2018; Hulett et al., 2007; Parkinson et al., 2019). For instance, communications from Fire Chiefs and other leadership should reiterate diversity goals and show continual encouragement for people to participate equally (Bendersky, 2018; Parkinson et al., 2019). This is essential for “existing personnel to understand the purpose and context of the drive for diversity, to dispel disruptive rumours and to generate authentic support” (MacDonald, 2019, p. 4). Further, Bishu et al. (2020) suggest creating new ethical codes that embed gender parity to provide the foundation for new organisational cultures and policies. They argue that ethical codes need to be “aspirational” and guide desired behaviours and sanction undesirable behaviours (p. 8).

In this process of change, resistance to diversity or inclusion practices and procedures should be both expected and addressed to avoid new strategies being “undermined by rumours, misunderstanding and distrust from existing personnel” (Parkinson et al., 2019, p. 90). Education and training and communication plays an important role in addressing resistance, as research shows that many firefighters are unaware of “how their status-quo perceptions about their profession reinforce bias and create unequal opportunities for peers from underrepresented groups” (Bendersky, 2018). Parkinson et al. (2019) suggests that education and communications should address topics like: managers’ assumptions about what women want or what their abilities are; the widespread misunderstanding about merit and quotas that fails to recognise the glass escalator that exists for men and the glass ceiling for women; what constitutes sex discrimination and harassment; and the importance and need for bystander interventions.

Finally, to ensure that initiatives and programmes have the intended outcomes, and to deepen the understanding of barriers to success, there is a need for ongoing measurement and evaluation of initiatives (MacDonald, 2019). Annual reviews and audits could focus on areas like the take-up and availability of gender equity programs or the approval of training and development for women (Parkinson et al., 2019).

4.3.6 Lack of Progress: Things Have Not Gotten Much Better

To conclude Section 4, it is worth noting the apparent lack of progress over the last 30 years. Across sectors, women’s representation in traditionally male-dominated professions has increased. For instance, women now constitute half of all lawyers, veterinarians, and commercial and industrial designers. However, on the whole, little progress has been made with women remaining underrepresented in emergency professions (Bishu et al., 2020; Gouliquer et al., 2020), despite worldwide efforts to recruit women into firefighting and other emergency services (Bendersky, 2018) and a global embracing of “equal opportunity

and anti-discrimination laws” (Batty & Burchielli, 2011, pp. 309, 310). Even where the numbers of women have increased slightly, this has predominantly been in particular roles, in the lower levels and in certain locations (Gouliquer et al., 2020; Parkinson et al., 2019).

Moreover, in many countries, fire services seem to be well behind other emergency agencies, such as the police, when it comes to diversity recruitment (MacDonald, 2019). Within the New Zealand context, emergency services agencies, such as the police and the Defence Force, are perceived to have more of a ‘diversity presence’ than the Fire Service (Wilson & Scanlen, 2016). Indeed, Wilson and Scanlen (2016) outline the similarities and differences between the diversity strategies and initiatives implemented by various New Zealand emergency service agencies.

Globally, when it comes to the fire services, the US is seen to be the most advanced in terms of diversity recruitment, but even their initiatives are relatively recent and outcomes are yet to be fully assessed (Bendersky, 2018). In addition, “despite significant effort and commitment, even the larger fire departments such as New York (FDNY) and Los Angeles (LAFD) struggle to increase racial and gender diversity” (MacDonald, 2019, p. 3). As just noted in the previous section, one explanation for this slow progress is the failure to move from diversity strategies to inclusivity practices. In the following section, we turn to the review of research conducted on behalf of Fire and Emergency over the past 20 years.

5 Review of Previous FENZ Research

Our interest is to explore the barriers and enablers to career progression throughout the female FENZ workforce. With women still being underrepresented within FENZ, in particular in leadership positions, we want to gain a better understanding of the work and career experiences of women within FENZ, as well as the opportunities and challenges in recruiting and retaining women.

For this report, we conducted a review of the reports commissioned by/prepared for FENZ between 2001 and 2021. We included reports that have a direct link with the female experience within FENZ, like those focused on female recruitment and retention within FENZ (e.g. Brough & Smith, 2002; UMR Research, 2003) or those that looked at harassment and bullying within FENZ (Shaw, 2019). In addition, we also reviewed reports that deal with related issues or had potential relevance for the topic under study. This included reports on motivations for joining and staying in the service (e.g. Alkema, Murray, & McDonald, 2013; Duckworth & Thompson, 2019; Wilson & Scanlen, 2016); recruitment programmes (e.g. Wright & O'Driscoll, 2009); workforce diversity (e.g. MacDonald, 2019; Wilson & Scanlen, 2016); developing inclusivity (Utumapu & Utumapu, 2016); the relevance of fire stations (Roguski & Gregory, 2014); building quality relationships in the emergency sector (Roguski & Gregory, 2015); firefighter wellbeing (e.g. Adams, Asiasiga, McManus, & Dickinson, 2018; O'Keeffe, Zaslona, & Signal, 2020; Parker, Moore, Baille, Pearce, & Anderson, 2008); health and fitness requirements for rural fire fighters (Parker, Bayne, & Clifford, 2014); experiences of fire services in rural communities (Johnstone, 2002); and reports detailing minority group experiences (e.g. Kaiwai, Kerr, Jensen, Gregory, & McCreanor, 2008; Simmonds, 2019; Tiatia, Kingi, Rankine, & Clarke, 2006; UMR Research, 2007). Appendix 2 provides an overview of the reports reviewed, including findings and recommendations.

We focused the review on these areas:

- What do we know about women's experiences of working at FENZ?
- What are the enablers and hurdles in relation to women's career progression?
- Have these experiences changed over time?
- What is not known about the experience of women working at FENZ?

The review highlighted several observations and themes, which are discussed here.

5.1 Trends in Previous Research Focus, Sample and Methodology

Before we discuss what is already known about the experience of women within FENZ as presented in previous FENZ reports, it is worth noting that overall, there is a lack of knowledge about women working at FENZ. This lack of knowledge is partly explained by a general lack of focus on women's experiences in FENZ studies, and more specifically, to an absence of studies that focus on women's career progression. This lack of knowledge is further explained by women's underrepresentation and/or complete absence in research samples, and women's fear of speaking up within research. We discuss these in more detail below.

5.1.1 Lack of Focus on Women's Experience

Only two reports over the last 20 years speak *specifically* to the experience of women within FENZ and both these studies were done almost 20 years ago. Brough and Smith's (2002) report on advancing the recruitment and retention of women within the New Zealand fire service is the only report conducted in the last twenty years that examines volunteer *and* paid staff while UMR Research's (2003) report examined recruitment and retention of women volunteers only.

5.1.2 No Studies Focus on Women's Career Progression

While some of the early FENZ studies focused on women's experience within FENZ, these studies looked predominantly at recruitment practices; barriers and motivations for joining; and to a lesser extent at issues related to retention. These early studies did not, however, focus on female career progression within FENZ. Later studies, which focused on diversity, bullying and harassment (e.g. MacDonald, 2019; Shaw, 2019; Wilson & Scanlen, 2016), presented some valuable insights relevant to the female experience, but they also did not focus on career progression specifically. This means that there has been no study where women within FENZ were asked about their perception and experience of career progression within FENZ. Only Wilson and Scanlen's (2016) report on diversity has a section

that speaks to progression barriers for women and ethnic minorities, which will be discussed below in Section 5.2.2 on Career Paths and Career Progression.

5.1.2.1 Trends in Funded Studies

The lack of focus on women’s experience (both in general and in terms of career progression) may be related to an overall lack of studies focused on the employee experience and the internal environment, requested by FENZ. In a metadata analysis of studies funded by the NZFS contestable research fund, Nana, Stokes, and Molano (2010), for example, found that there is a clear lack of research associated with two (of the five) NZFS strategic objectives: ‘to increase urban and rural service delivery’ and ‘to develop and protect our people, and promote internal stakeholder partnerships’ (New Zealand Fire Commission, 2012) (see Table 1). The latter strategic objective is most relevant in the context of the topic under study in the present report. In the 2012-2017 Strategic Plan (New Zealand Fire Commission, 2012), for instance, the national goals under this objective included enhancing diversity and ensuring employee turnover remains low.

	Improve community fire outcome*	Increase integration of urban and rural service delivery*	Contribute to enhanced community security *	Improve service performance accountability and resource management*	Develop and protect people and promote internal stakeholder partnership*
Built environment	74	2	72	68	22
Earthquake	3	0	3	3	1
Environment	10	0	9	5	7
Rural	20	1	20	21	4
Volunteer/people	1	1	1	6	4
Epidemiological	8	0	8	5	0
Fatal	14	0	14	4	3
Social	31	0	31	18	5
Maori	3	0	4	2	0

*Frequency indicates multiple reponses

Table1: NZFS research by research area and strategic objective, total population (Nana et al., 2010, p. 12)

In addition to the overall lack of studies about women at FENZ, there are some limitations to the studies already conducted.

5.1.2.2 Sample Limitations of Funded Studies

The insights we have about women's career experiences are limited by the sampling choices of studies. For instance, almost all studies enquiring into the experiences of women focus on women who are currently *in* the service and as a result, exclude the experiences of women who left FENZ. It would be of interest to hear the experiences of the latter, in particular if they were mid-career, and whether their experiences impacted on their decisions to leave fire and emergency. While exit interviews could provide valuable information around reasons for leaving, Wilson and Scanlen's (2016) study found that processes around conducting exit surveys needed improving within FENZ. One issue is that exit surveys are being sent to FENZ work emails, even though the ex-employees no longer check, or no longer have access to, their FENZ email.

In addition, the voice of women who are still in the service may not represent the voice of all women. Reports suggest that women who remain in fire services may be the ones who 'fit in' with 'the boys;' were able to work harder than their male counterparts; were able to confront sexist behaviour; or were able to adjust and put up with men's "foibles" (UMR Research, 2003, p. 43). The UMR Research (2003) report notes that some older female recruits had suffered "quite heavy ribbing in their 'early days'", many of whom felt "women with less 'strength of character' would have left the service as a result" (p. 57).

Finally, it could be of interest to include leaders and men when studying the challenges of women's acceptance and women's career progression within FENZ. While it is clear from earlier FENZ reports that male acceptance of females is an issue in some brigades, and that

leadership can be a barrier in acceptance and career progression, there has been no study that explored the reasons why, and possible pathways to improvement, with those who may have an issue with women in the service.

5.1.2.3 *Fear of Speaking Up and Participation*

Several reports mention that FENZ personnel did not want to participate in studies for fear of being identified, being singled out for participating, or other repercussions. For instance, Brough and Smith (2002) mention that in particular NZFS *career* firefighters were reluctant to participate. Moreover, even when results are anonymised or participation is confidential, people in rural brigades can easily be identified.

Where people do participate, they may not tell the whole truth about the issues they experience. Several reports highlight the fear of speaking up and not wanting to be seen as complaining within the culture of FENZ. According to Shaw's (2019) report:

“Many participants commented about a culture of ‘keeping your head down,’ in which fear of the consequences or possible retaliation meant people were afraid to report bullying or harassment or to speak out against unacceptable behaviour. Other reasons for ‘not making waves’ related to the power of peer pressure, wanting to ‘fit in’ and be accepted as part of the group, as well as team loyalty” (p. 27).

In addition, Shaw (2019) mentions the existence of “tribes” within FENZ, which protect each other, and the existence of which may limit how willing people are to speak up about issues (p. 19). Shaw's (2019) report further notes that the nature of the firefighting job creates a “hero culture,” in which a degree of bullying and harassment is accepted, tolerated, and even expected from the “heroes” (p. 19). The existence of the “hero culture” can be another barrier to speaking freely about negative behaviour from someone who is considered a hero in the service. Shaw (2019) also mentions that most people who bully are senior colleagues,

and that complaining to someone who outranks you is difficult. While the hierarchical command and control structure is appropriate for dealing with fire and emergency situations, it is counterproductive in addressing a bullying culture.

In their study on addressing fatigue within FENZ, O’Keeffe et al. (2020) found a similar barrier within FENZ’s culture:

“To effectively manage fatigue within an organisation, there must be a culture in which individuals are comfortable raising fatigue as a concern. In the interviews we conducted, there were concerns raised that this was not always the case. Changing the culture around fatigue takes time and requires significant organisational effort and commitment, including effective fatigue policy, clear and regular communication about fatigue, support for fatigue management initiatives from management, and taking fatigue reports and issues seriously” (p. 29).

As a final example in this theme, Wilson and Scanlen’s (2016) study on diversity and inclusion found that the issues of speaking out were compounded for women fire fighters because of their minority status:

“Some woman firefighters were said to have experienced problems with bullying, discrimination or harassment in their brigade, and despite NZFS policies in place that outline processes to deal with workplace issues, did not want to be seen to be complaining as they are a minority and fear backlash from their colleagues: they will either put up with problems or leave the Fire Service” (p. 63).

These observations suggest that the findings from these previous studies, and indeed, any future studies, are limited to those who felt comfortable enough to participate in research. This prior research also highlights the importance of creating psychological safety for future research participants. As mentioned above, interviewing current staff and volunteers may

hold limitations, and that it would be of interest to talk to women who have since left FENZ, including those who were in leadership positions, and who may feel able to talk more freely about their experiences. These observations of FENZ found in existing reports also suggest that the effectiveness of any interventions or solutions to women's experiences may be limited if the current culture around the fear of speaking out is not addressed.

5.2 Working at FENZ as a Woman: What do we know?

5.2.1 Issues Experienced by Women FENZ members

In the two early studies focusing on women at FENZ, Brough and Smith (2002) and UMR Research (2003) reported that in 2002 only 1.62% of career firefighters and 10.34% of the volunteer firefighters identified as female. These reports highlight a number of challenges for the recruitment and retention of women in FENZ.

These challenges relate to women feeling unsupported or discriminated against *during the recruitment process*, with some reporting that certain brigades would never vote to accept women volunteers or would make training so hard that women could not complete it. The reports also mention that while during the recruitment and training process NZFS repeatedly highlighted the value of having women fire fighters. However, once on the job, this impression of accepting and valuing women within the service quickly disappeared. Rather, there was a feeling among the participants in these two studies that the espoused female friendly values had not filtered down to staff and officers (Brough & Smith, 2002; UMR Research, 2003).

In terms of challenges experienced *after being recruited*, the reports mention a lack of positive encouragement and not being made to feel welcome (Brough & Smith, 2002). Working in a male-dominated environment was noted as one of the worst aspects of the firefighter role in both studies. This included frequent talk about sex, personal sexual

remarks, excessively crude remarks, ribbing and taunts from male recruits, comments on capability as a female fire fighter, making mistakes being attributed to being female (increased scrutiny) and lack of appropriate equipment and facilities (e.g., no appropriate gym or toilet facilities, heavy gear, uniforms that do not fit) (Brough & Smith, 2002; UMR Research, 2003). Participants also mention male chauvinism in the higher ranks. The reports also note a lack of women role models in higher level positions, and extra scrutiny towards those women taking (or wanting) higher level positions.

Over the years, several FENZ reports that did not specifically focus on the experiences of women within FENZ echo these observations. UMR Research's (2001) report on expanding the volunteer fire brigade, for example, notes that "women [volunteers] do encounter discrimination, macho attitudes, and an 'old boys' club' that can make it difficult for them to be effective" and that "there were signs that women are not on an equal playing field with all of their colleagues" (p. 80). Cerno Limited's (2003) report also mentions issues related to inconsistency in recruitment and assessment within FENZ, which could be the basis for discrimination and exclusion.

Wilson and Scanlen's (2016) later study similarly found that "sexism was seen [by fire service stakeholders] as a significant barrier to retaining women firefighters" (p.62). Some brigades were described as not "female friendly" because of "ill-fitting uniforms" and because young women were at times "labelled as 'distractions' to their male colleagues and gossiped about in small communities" (p.62). At the same time, men were "seen 'to get away with' 'jokes', comments or behaviour that would not be acceptable in other workplaces" and women firefighters were "sometimes undermined, not taken seriously or not listened to by their crew members and the public" (p. 62). The lack of acceptance was also echoed by Adams et al. (2018) in their study on fire fighter wellbeing, which found that firefighting was (still) "identified as a masculine domain with varying levels of acceptance for women firefighters across brigades" (p. 6).

Being exposed to (unconscious) gender bias was a recurring theme in several reports (e.g. Adams et al., 2018; Wilson & Scanlen, 2016), and women reported several gendered-themed challenges working with the NZFS. These included: feeling that they need to 'prove themselves' to men; standing up to the assumption that women are more likely to fail; not being seen as capable as men; and (as was also noted in some of the early studies) having failures or difficulties highlighted more often than their male colleagues (Wilson & Scanlen, 2016). Challenges also related to the gender-stereotyped roles that both the community and male counterparts hold of women. In terms of the community, "it was perceived ... that the public believes women have ulterior motives for joining the Fire Service (e.g. they are interested in starting relationships with male firefighters)" (Wilson & Scanlen, 2016, p. 47). They further found that operational support personnel were frustrated by the stereotypes held by male colleagues about women in administrative roles; for example, that women are "responsible for bringing coffee, preparing food for staff events, and being a minute-taker/secretary at meetings" (p.47). Adams et al. (2018) make references to many women firefighters experiencing gendered role expectations. Some women were fine with fulfilling the 'mother figure' or 'listener' roles (unconsciously) assigned to them, while other women firefighters provided examples of being uncomfortable with the gendered stereotypes: "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" (p. 28).

Wilson and Scanlen's (2016) report further describe that male firefighters perceived women career firefighters as less reliable because they could become pregnant and were "more likely to leave because they did not want to put their lives at risk" (p.63). There was a perception that "pregnancy and marriage are an inconvenience to the Fire Service, and an assumption that women who become firefighters will leave as soon as they want to start a family" (p. 63). The report also notes little flexibility for parents who need to stay at home to look after sick children, for instance, and concludes that these ideas and lack of facilities may not engender the retention of women in the fire service.

Finally, while the percentage of women within FENZ has increased over the years, reports note that firefighters as a group were still not reflective of the communities they serve (Duckworth & Thompson, 2019; Wilson & Scanlen, 2016). In 2016, 86.1 percent of the 10,598 personnel that comprised the NZFS workforce were men and only 13.5 percent were women (Wilson & Scanlen, 2016). By 2018, women made up “33% of non-operational, 4% of paid operational, 16% of volunteer and 47% of communications centre staff” (Fire Emergency, 2018, p. 5).

5.2.2 Career Paths and Career Progression at FENZ

Wilson and Scanlen’s (2016) report described how women were overrepresented in administrative (90.5 percent), accounting (71.4 percent) and finance positions (75 percent). Although women held ‘midlevel’ leadership positions (e.g. team leaders = 55.6 percent; manager = 28.9 percent), they were ill-represented in higher management roles. Wilson and Scanlen (2016) report that:

“No woman held a rank of Assistant National Commander, Area Commander or Assistant Area Commander; all 83 of these positions were held by men. Further, as rank increased, the representation of women within these ranks decreased: women represented 22.5 percent of Recruit Firefighters, 13.8 percent of Firefighters, 5.1 percent of Senior Firefighters, 3 percent of Station Officers, and 0.6 percent of Senior Station Officers” (p. 36).

Civilian women in particular felt as though their skills and expertise were not being recognised or ‘overlooked’ by ranked military personnel. This perception was echoed by other women in FENZ who indicated that if “you haven’t been a firefighter... and you’re a woman, you have a lot more to prove” (p. 48).

Several reports note the lack of women in higher level positions within FENZ (Scott, 2021) and the heightened scrutiny towards those pursuing higher positions (e.g. Brough & Smith, 2002). Scott's (2021) research examining the enablers and barriers to career progression from Senior Station Officer to Executive Officer, had no women in the sample, and at the time of the research, there was only one woman Senior Station Officer. Instead, as already mentioned, only Wilson and Scanlen's (2016) report on diversity has a section on progression barriers experienced by women and ethnic minorities. One barrier mentioned for women and ethnic minorities is the perceived tension between the team-based culture of the NZFS and the individual's desire to move up the ranks:

“Due to their smaller numbers in the organisation, women and ethnic minorities already stand out as being ‘different’ from the rest of their team members, therefore gaining a higher rank could be met with negative reactions from their colleagues, compounded by both Tall Poppy Syndrome and perceived negative attitudes around their ‘differences’” (p. 63).

Wilson and Scanlen also identified several barriers to career progression that were not specific to women or minority groups. For example, the single-tier entry system into the NZFS career operational firefighter force means that all career firefighters must start at the ‘bottom’ of the ranks. This system, and the length of time required to progress to a more senior rank, may also dissuade people from considering a career within the NZFS. Second, it was noted that older NZFS workforce creates a bottleneck to advancing to more senior positions; until incumbents retire, there is little opportunity available for others to progress. It is important to note that these barriers were identified by a sample of ‘stakeholders’ (e.g. managers and people from comparable agencies) that included almost no NZFS firefighters, and even less women.

5.2.3 Has the Female Experience at FENZ Changed over Time?

Reports over the years have provided a range of recommendations in relation to improving the number, retention and treatment of women within FENZ. For instance, Brough and Smith's (2002) recommendations included replacing the steel gas bottle with a lighter version and adjust uniforms; creating a buddy scheme to support women firefighters; acknowledging the role of the station officers for improving the acceptance of women; offering longer maternity leave; developing equality, standardisation and consistency in the recruitment and selection process; and implementing education programmes to promote diversity and awareness. Brough and Smith also mention the lack of sexual harassment data and the need for recording sexual harassment cases, as well as additional research into the experience and consequences of sexual harassment within FENZ.

The reports by UMR Research (2001) and Cerno Limited (2003) particularly focus on recruitment practices, and on initiatives that would support women in the service, like support groups for women or buddying up with another female firefighter. Wilson and Scanlen's (2016) report, which focuses on increasing diversity within FENZ in general, offers several relevant recommendations for the topic under study, including harnessing the strong organisational culture of FENZ to drive changes in perceptions and behaviours related to workforce diversity. They also recommend emphasising greater accountability and buy-in from managers and leaders regarding diversity and inclusion practices, emphasising inclusion-based values and practices to ensure a culture of respect and support, and enhancing the support for diverse groups within FENZ. To achieve these goals, they suggest offering leaders and Chief Fire Officers in particular, additional training around cultural competency, inclusion and diversity, unconscious bias and communication; continually developing current diversity initiatives; and, creating greater transparency in the appointment processes.

Duckworth and Sinko (2017) highlight the importance of creating a family friendly culture in brigades by, for instance, adopting family friendly measures such as offering flexibility

around family or personal requirements; promoting a 'family first' message in weekly trainings; and giving volunteers permission to not turn out. In their report on firefighter wellbeing, Adams et al. (2018) recommended providing inclusiveness training to all firefighters; and to continue to support brigade leaders, especially among 'old school' leaders, to build and maintain environments that encourage 'help seeking' and to foster a culture where it is OK to 'ask for help.'

Shaw's (2019) comprehensive review of bullying and harassment at FENZ acknowledged that a shift in attitudes regarding harassment and bullying can be discerned. However, Shaw also recognised that discrimination and harassment on the basis of sex, race and sexuality continues at FENZ and offered a series of recommendations, that if successfully implemented, would likely improve women's careers and working lives. At the forefront of these recommendations is the need to better recognise that bullying and harassment is deemed a risk that must be managed according to Health and Safety legislation. To manage this risk, Shaw recommended developing common values to be adhered to by all; reviewing, amending and/or replacing policies and procedures; and assigning clear lines of managerial responsibility for implementing and managing bullying and harassment policies and procedures. The report particularly identifies that because the "status of some individuals has enabled them to harass with impunity' (p. 3) there is a clear need to hold individuals to account for their behaviour. Training and development programmes are recommended to augment policy initiatives. To be successful, training and development initiatives need to: recognise, consider, and address the 'subcultures' that enable harassment and shield harassers; equip managers with soft skills and people skills necessary to address complaints; and communicate bullying and harassment policies throughout the organisation. The Report also identified systemic barriers to reporting discriminatory and harassing behaviours, thus recommended establishing and managing a safe complaints procedure. The report suggested that as part of the implementation and review phases, performance measures and standards be set to help improve the adherence to new values and codes of behaviour, and to ensure the reduction in bullying and harassing behaviour. Finally, the Shaw acknowledged the importance of employee unions and associations for facilitating changes

in attitudes within FENZ and their commitment to supporting FENZ to implement the recommendations in the report.

Finally, the O’Keeffe et al. (2020) study on fatigue similarly identified the need for a policy to manage fatigue that includes clear lines of managerial responsibility and accountability, and effective data collection, reporting and review processes. In addition, O’Keeffe et al. (2020) make a number of recommendations that are applicable to women, for example, the need to better understand and then manage the specific health risks experienced by women firefighters.

Despite the suggestions and recommendations for improvement offered in these series of reports, the issues experienced by women within FENZ appear to be enduring, with many of the problems or challenges highlighted in early reports still occurring in reports 20 years later. Understanding this apparent lack of progress in more depth could be important if future studies and recommendations are to be effective in creating change. As summarised in the following section, the current reports offer some insight regarding the barriers affecting progress towards improving women’s experiences in FENZ.

5.2.4 Barriers to the Uptake and Utility of Research within FENZ

A number of barriers have been identified that some suggest result in slow progress towards improving women’s experiences at FENZ and achieving diversity and inclusion policy outcomes. These include a lack of time to implement recommendations, and the failure to fully account for the effects of structural and cultural barriers, the role of leaders, and resistance to change on uptake of recommendations in previous FENZ reports, as discussed here.

5.2.4.1 Lack of Time to Implement Recommendations

Kaiwai et al., (2008) investigated (among other things) the barriers to the uptake and utility of currently available research commissioned by the New Zealand Fire Service Commission (NZFSC) in relation to Maori. They found that research reports are underused, and that key barriers to the uptake of research were the limited time that NZFSC staff could dedicate to reading research reports, as well as issues with practical accessibility and readability of materials. They recommended that NZFSC reviews its research needs and delivery with the end beneficiary in mind; that research reports provide stronger links between research findings and recommendations on how to use them; and to try to disseminate research in easily accessible formats to staff. They also highlight the need for location specific research and evaluation as contextual variables are often crucial to the success of projects.

Interestingly, they also note that despite the considerable volume of research commissioned, there is very little follow-up evaluative research examining the effectiveness of newly implemented projects and interventions. This means that there are limited feedback loops on the usefulness and effectiveness of recommendations and interventions. A sentiment that is echoed by several others, like MacDonald (2019), who mentions in her report that “there is a serious lack of formal evaluation of the strategies and programs that have been implemented to date” (p. 3).

5.2.4.2 Structural and Cultural Challenges

Many of the early studies skim over structural or cultural issues that may underlie unfavourable behaviour towards women. The reports predominantly provide recommendations on ‘practice level’, like ‘adjust women’s clothing’ or ‘add facilities for females in stations’(Brough & Smith, 2002; UMR Research, 2003), but they do not question why uniforms are not made to fit women or why there is a lack of toilets for women, and what the lack therefore speaks to in terms of overall FENZ values or culture. Similarly, suggestions are made about what women within the service could do to enhance their

experience ('create a female support group', 'buddy up') (Brough & Smith, 2002; UMR Research, 2003), instead of creating a deeper understanding of why men in the service are, for instance, not accepting or not supportive of women. This often implies that women are responsible for resolving the issues identified in the reports.

Later reports (e.g. O'Keeffe et al., 2020; Shaw, 2019; Wilson & Scanlen, 2016), while not specifically focused on women's experiences at FENZ, do locate experiences within the wider FENZ organisational and cultural context; ask challenging questions about this context; and make solid suggestions of where and how to start ameliorating the situation. As mentioned above, this includes high-level and best practice approaches, such as: clear communication of intent throughout the organisation, defining values and codes of conduct, incorporating the concept and importance of diversity into organisational values, developing supportive performance management systems, policies, and strategies, and creating accountability for these areas of improvement. For instance, Wilson and Scanlen (2016) conclude that:

"The organisational culture of the Fire Service can be used as a tool to drive improvements in the recruitment, retention, and progression of a diverse range of employees. It will be important for the NZFS to further develop an awareness of its organisational culture and how its organisational values manifest themselves into behaviours to overcome diversity-related barriers and leverage off of existing organisational strengths" (p 67).

They suggest that, in terms of workplace diversity within the Fire Service, 'root causes' of both barriers and enablers to workplace diversity are situated within the non-visible elements of organisational culture, like organisational values, assumptions and beliefs (e.g., barriers attributed to unconscious leadership and gender biases, assumptions regarding responsibility and accountability). "Any future changes focused on increasing workplace diversity must first target the non-visible components of the Fire Service in order to create lasting behavioural shifts" (Wilson & Scanlen, 2016; p. 68).

5.2.4.3 *Role of Leadership*

A number of authors (e.g., Shaw, 2019; Wilson & Scanlen, 2016) acknowledge the work and commitment of current FENZ leadership towards change, and the range of initiatives planned or in place to address negative behaviour within FENZ. However, the role of leadership, and making solid recommendations for leadership, is often only touched on lightly in the earlier reports. Many reports mention the role of leaders, station chiefs and others in power when it comes to issues experienced by women and overall tolerance for women in the service. The Fire Station Chief or Chief Fire Officer (CFO), for example, is seen as crucial in facilitating acceptance of women, developing a supportive culture, and guiding overall (male) behaviour and atmosphere within the station (Brough & Smith, 2002; Duckworth & Sinko, 2017; UMR Research, 2003).

UMR Research's (2001) report mentions that problems with accepting women often reflect the leadership styles of the Chief and other officers. In a later study, UMR Research (2003) found that "the choice of Fire Chief was ... crucial to overall station morale, a factor which may correlate to issues of male dominance and the assumption that as older men retire, there will be more overall acceptance of women" (p. 11). Bimler, Simpson, and Brander's (2017) comparison of strong and struggling volunteer brigades found that leadership was the single most-reported theme when participants described and contrasted brigades:

"No other factor featured as predominantly as to how a brigade operated. Chiefs were associated with influencing the brigade culture and professional operational standards, the development of others, the degree of wider community connectedness and whether or not people wanted to join as volunteer members" (p. 83, 84).

They found that the occupational status of a brigade chief was a significant differentiating feature between high and low performing brigades: "High performing brigades appeared to often have chiefs that in their day jobs were employed in leadership / managerial positions

or were successfully self-employed and employers of staff” (p. 19), indicating that leadership and management training may be of key importance.

However, most of the earlier reports appear ‘careful’ in placing responsibility for challenges experienced by women (and others) with those in leadership positions. Leadership issues may be mentioned briefly but they are not addressed in depth; and typically, do not feature in report summaries or recommendations. For instance, if the choice of CFO and their management capabilities are found to be key, then why not suggest selection criteria be amended when appointing CFOs and the need to add performance metrics for CFOs that reflect their ability to create a kind and accepting brigade? A lack of progress in addressing issues may partly be due to this lack of focus, or lack of willingness to focus, on the role of the leader.

In contrast, more recent reports emphasise the lack of and the need for declaring leadership commitment, leadership accountability, and leadership training (e.g. O’Keeffe et al., 2020; Shaw, 2019; Wilson & Scanlen, 2016). Shaw (2019) recommends this starts with FENZ acknowledging that harassment and bullying *is* a feature of the FENZ workplace at all levels and across all regions, and that unacceptable levels of racism, sexism and homophobia remain. Furthermore, Wilson and Scanlen (2016) highlight the importance of “increased accountability amongst those in managerial or leadership positions” as one way “to demonstrate that the Fire Service is considering the topic of diversity seriously and intentionally, and would also help increase organisational buy-in to diversity initiatives across all ranks and levels of the NZFS” (p. 70).

5.2.4.4 Resistance to Change within FENZ

While related to the previous two sections, several reports mention resistance to change as a major barrier in successfully implementing new initiatives within FENZ. In Wilson and Scanlen’s (2016) study, the Fire Service and comparable agencies noted a resistance to

change and entrenched attitudes as one of the main challenges to increasing workplace diversity at FENZ:

“The Fire Service was seen by many to be a ‘traditional’ organisation where the ‘this is how things are done here’ approach was seen to thwart attempts to change its organisational culture. Some Fire Service personnel believed that the ‘old guard’ expect the new recruits to just ‘toe the line’ and fit in with normalised behaviours” (p. 48).

The role of the ‘old guard’ in resisting change to the status quo was echoed by Shaw’s (2019) findings: “Participants see positive change as new people of a new generation come through, but also observe that some of the new are influenced or tainted by the old guard, or pushed out if they are not seen as conforming” (p. 29). The slow nature of career progression that is dependent on number of years in service within FENZ, does not help this situation as “FENZ’s low staff turnover rates generally contribute to the slow rate of change as it takes a long time for change to trickle down through the ranks” (p. 29). Similarly, Bimler et al. (2017), found that brigades that resisted or struggle to change typically had:

“long-standing chiefs ... considered to be ‘past their use-by dates’. These chiefs didn’t tend to bring others up within their brigade and were highly resistant to change, viewing development as unnecessary. They were not necessarily aggressive or defensive with others but more set in their ways with a strong historic perspective – they hadn’t moved with the times or kept up with ongoing developments. In some cases it was more about inactivity rather than active resistance” (p. 31)

Furthermore, change resistant brigade chiefs had a narrow perspective of what they would and wouldn’t do, and seemed to regard change as someone else’s priority (e.g., NZFS) rather than a requirement for their brigade. External suggestions were often viewed as threatening or encroaching rather than helpful. These chiefs often took an “us versus them” stance.

If a future study about the female experience and career progression within FENZ is to make a marked improvement, it might be important to acknowledge and address these barriers. As a final note to this section, the apparent lack of progress as an outcome of previous studies and reports has not gone unnoticed by FENZ personnel and other participants. The recent Shaw (2019) report mentions that a considerable number of participants expressed their scepticism and lack of trust in FENZ to implement recommendations of reports, noting that, “in part, this scepticism is based on their experience of seeing other reports and initiatives flower and then wither without action taken on them” (p. 58). Some participants in Wilson and Scanlen’s (2016) study remarked on the diversity initiatives that had been in place within the NZFS previously, but had not been continued (e.g., diversity and fairness strategy and a Diversity and Fairness Equal Employment Opportunities (EEO) Steering Group). This meant that perceptions about the effectiveness of Fire Service diversity initiatives were mixed and that such initiatives “were often considered ‘box-ticking exercises’ with no significant changes being observed” (Shaw, 2019; p. 11). Acknowledging this ‘scepticism’ may be important when approaching participants for a future study.

5.3 Additional Themes and Observations

In concluding this review, several additional themes and observations from past FENZ reports were identified that could be relevant for future research. These relate to sub-groups within FENZ; lack of awareness of unfavourable behaviour; comparable agency learnings; and valuing women on their own merit.

5.3.1 Sub-Groups within FENZ

FENZ personnel is not a homogenous group (Bimler et al., 2017; Nana et al., 2010; Wilson & Scanlen, 2016). It is clear from previous studies that the experiences, challenges and opportunities within FENZ differ between rural and urban brigades; volunteer and paid

personnel; and even among different geographical regions (Alkema et al., 2013; Wilson & Scanlen, 2016). Bimler et al. (2017)'s research emphasised the need for brigades to be understood as unique units, as each is so different in its characteristics, and in going forward, suggests that a blanket approach or policy may not be suitable to either the management or development of volunteer brigades. Therefore, when studying women's experience within FENZ, and offering suggestions, it may pay to take such differences into account, rather than understanding women within FENZ as one single group. Moreover, an intersectional perspective on women's experiences at FENZ appears to be a significant current gap.

5.3.2 Lack of Awareness of Unfavourable Behaviour

It is also worth noting that there can be uncertainty among participants and personnel about what constitutes sexism, bullying or harassment (Shaw, 2019). People sometimes do not know when they behave 'badly,' unsympathetically or in hurtful ways. Some may perceive their behaviour as falling within the boundaries of, for example, performance management, or view their personal behaviour as humorous (just 'making a joke.'). Understanding the diversity in interpretation regarding acceptable and offensive behaviour within FENZ could inform the design of future research and the framing of future recommendations arising from such research. Also, it may be worth investigating how a collective understanding of what constitutes negative behaviour can grow and develop within FENZ.

Interestingly, Shaw's (2019) study suggests that a certain insensitivity towards others might also reflect the need to have a thick skin within the Fire Service. In an environment characterised by continual exposure to 'bad stuff' (death and injury through car crashes), there appears to be a reduction of empathy and a language of toughness as a way to cope, and "people are often blind or blasé to the effects of their behaviour on others" (p. 19). As participants explained: "The whole lifestyle factor of being a firefighter is repressing your continual exposure to unfortunate things. You turn a blind eye to the blood and you turn a

blind eye to an enormous list of things because you're doing good. ...it's easy to turn a blind eye to the bully as well" or "the culture within the organisation is a tricky one because we've got to cope ... day to day [with] all sorts of nasty shit thrown at us. Whether it be finding dead bodies or injured people from car crashes, there's the whole gambit of nasty things we have to do. And so we get a thickness about our skin" (p. 19).

This exposure to non-fire incidents such as medical calls, motor vehicle accidents and suicides, has increased significantly since fire service brigades have become co-responders to non-fire emergencies with St John's and other ambulances in 2014 (Adams et al., 2018). Adams et al. (2018) found that firefighters experience largely negative impacts on them and their families from these call outs. These negative impacts include "anxiety about their performance and [feelings of] self-doubt" in terms of not doing enough or needing to do better (p. 1). Several career and volunteer co-responder firefighters indicated that "they were not well prepared for these roles and with more training they could be more effective" (p. 2).

The current brigade support for firefighters consists of formal and informal processes, with formal support relating to debriefing, leadership, peer support and employee assistance programmes (EAP). Adams et al. (2018) note that the quality of formal support was met with mixed reviews, with some preferring formal and others informal debriefing processes. While many spoke positively about the quality of leadership within their brigades, some referred to the 'old school' culture, practices and attitudes that hinders and 'frowns upon' help-seeking, which they felt would only change if the old guard retires. Some participants were also unsure whether seeking help would be treated as confidential.

It might be of interest to investigate in what ways firefighters can be better cared for so that they do not lose empathy, do not have to revert to toughness or bullying, and how they

might learn from the practices in place in other emergency services that have been found effective in caring for, and preparing, emergency workers.

5.3.3 Comparable Agency Learnings

Learning from comparable agencies has been suggested by several studies (e.g., MacDonald, 2019; Brough & Smith, 2002; Utumapu & Utumapu, 2016). These studies note that comparable agencies are further along when it comes to inclusivity and diversity, and female participation. Organisational attitudes towards female ambulance and police officers were also perceived as less of a problem compared to FENZ. Other emergency services agencies in New Zealand such as the Police and the Defence Force were also perceived to have more of a 'diversity presence' than the Fire Service (Wilson & Scanlen, 2016).

Wilson and Scanlen's (2016) study found that one of the differences observed between comparable agencies perceptions of workplace diversity and FENZ was the importance of inclusion in partnership with diversity: "The majority of comparable agencies considered that diversity should be closely associated with creating an inclusive and safe workplace for everyone, which was not a theme that came through as strongly with NZFS stakeholders" (p. 66). In addition, comparable emergency services:

"were more likely to perceive their organisations as valuing, managing and leveraging diversity: NZFS stakeholders were more likely to consider the Fire Service as tolerating diversity" (p. 66). Last, "every comparable organisation had at least one full-time person employed with specific and direct accountability for diversity initiatives, which was not a situation mirrored within the NZFS" (p. 66).

In their scoping research at eleven USA Fire Stations, Utumapu and Utumapu (2016) found that the importance of understanding the difference between inclusion and diversity, the need for early career coaching and mentoring of new recruits, and appreciating that each

Station is a unique and specific setting are key to designing policies that incorporate and value women and minorities within the fire service. These insights from comparable agencies and similar comparative learnings could also inform strategies in supporting the female experience within FENZ.

5.3.4 Valuing Women on Their Own Merit

It is clear from international research and FENZ studies that there is a deep need to introduce women into the fire service, and support them within the fire service, on their own merit and without falling into gender stereotypes. The ways in which this can be supported has not yet been studied. As MacDonald (2019) points out:

“While the common argument for increasing diversity is about better ‘reflecting our community’ a more useful approach might be to focus on reflecting the modern firefighter role and the different skill set that it requires. Firefighter is no longer primarily about fighting fires, it increasingly involves medical first response as well as engaging with diverse communities for planning, preparedness and risk reduction. While firefighters still need courage, physical strength and aptitude, they also need intellectual, social, and emotional skills required to fulfil these roles” (p. 4).

As mentioned previously, many of the women that ‘make it’ within the fire service are the ones who have proven themselves to be as good or as strong as men. A common sentiment among existing firefighters is, “I don’t care if you’re black, white, female, male, or polka-dot. All I care about is if you can do the job” (Bendersky, 2018, p. 1). However, as MacDonald (2019) points out, this sentiment is based on an entrenched belief that strength and physicality are the primary skills required for firefighting. Moreover, the assumptions about “performance-based meritocracy, combined with stereotypes about women’s relative lack of physical strength and stamina, have contributed to the belief that fire services have lowered their standards to accommodate female firefighters, and thereby, undermined the integrity and safety of fire service” (MacDonald, 2019, p. 10). MacDonald continues to point

out that “skills and merit based assessment of candidates must be applied by eliminating unconscious bias and removing structural barriers” and “assessment should also be relevant to the modern firefighting role” (p. 10). However, there appears to be room to deepen the understanding of how recruitment and other organisational practices, and culture and leadership can support a fundamental shift away from the old entrenched ways of looking at women within the fire service towards an understanding and appreciation of women with their own needs and merits.

As mentioned briefly above, the needs of women as well as the risks for women within the fire service have not had much attention and are not yet well understood. For instance, O’Keeffe et al. (2020) refer to a number of foreign studies (US and Korea) that indicate that the rates for adverse pregnancy, miscarriage and preterm delivery are high among female fighters compared to the general population. Both studies mention the possible role of shift work in these outcomes for women firefighters, and these authors argue for further research and the need for policies to protect maternal and child health. Other studies show that there is also an increased risk of mental health problems for women first-responders. “Considering the health risks identified for female firefighters ... an additional area of research may be gender differences in risks for volunteer firefighters and potentially, emergency communications personnel” (O’Keeffe et al., 2020, p. 27). They also note that, given the relatively low number of women career firefighters, it might be difficult to examine gender differences in this group.

6 Policies and Practices to Enhance Women’s Career Outcomes

As noted previously in this report, women remain underrepresented in FENZ, and often concentrated within a particular series of job categories (Wilson & Scanlen, 2016) with little previous research that has focused on women’s careers within FENZ. In one of the few examples, Scott (2021) identified the enablers and barriers to the career transitions from Senior Station Officer to Executive Officer. However, at the time of the report, 128 of the 129 Senior Station Officers were men, and all 36 Senior Station Officer participants were

men (Scott, 2021). While Scott provides valuable insight, the report does not fill the gap in the understanding of women's career experiences at FENZ.

However, as with all New Zealand employers, FENZ has obligations under anti-discrimination legislative framework (e.g., Equal Pay Act 1972 and Equal Pay Amendment Act 2020, Parental Leave and Employment Protection Act 1987 and subsequent amendments, New Zealand Bill of Rights Act 1990, Human Rights Act 1993, Employment Relations Act 2000 and subsequent amendments), the Crimes Act 1961 and the Privacy Act 1993. FENZ is also governed by the Fire and Emergency New Zealand Act 2017 and, as part of the State Sector, must abide by the State Sector Act 1988 and the Crown Entity Act 2004.

Collectively, this body of legislation, along with recommendations from prior research, has informed the design of FENZ's anti-discrimination employment policy framework, and subsequent targeted initiatives aimed to increase workforce diversity and to create a safe employment environment. In this section, these policies and initiatives aimed at improving diversity and women's access to employment and career are briefly reviewed.

6.1 FENZ Policies

6.1.1 Good Employer and Equal Employment Opportunity Policy (Reviewed 1 July 2017)

The State Sector Act 1988, the Employment Relations Act and the Crown Entity Act 2004 require state employers to be good employers and to implement equal employment opportunity (EEO) policies and procedures. FENZ's Good Employer and Equal Employment Opportunity Policy enables FENZ to meet these obligations. For example, this policy defines being a good employer as creating "good and safe working conditions" and designing, implementing, and reporting on an EEO programme. The purpose of FENZ's EEO programme is to identify and eliminate barriers "that tend to cause or perpetuate" inequality as experienced by individuals or groups and ensuring all employment decisions are based on merit (p. 2). Mirroring the target groups identified in these three Acts, this policy specifically identifies the need to recognise:

- “aims, aspirations and employment requirements of Māori
- need for involvement of Māori as employees
- aims, aspirations and employment requirements, and the cultural differences, of ethnic or minority groups
- employment requirements of women
- employment requirements of persons with disabilities.” (FENZ, 2017, p. 2)

6.1.2 Diversity and Inclusion (D&I) Strategy 2018 and the D&I Strategy Schematic and High-Level Roadmap

The creation of Fire and Emergency New Zealand in 2017 provided the opportunity to create a Diversity and Inclusion Strategy based on the principles of promoting a new and positive organisational culture that values inclusivity, diversity, and a sense of belonging. The document sets out the need for a Diversity and Inclusion policy, and identifies four strategic priorities, challenges to implementing the strategy and the means to overcome these challenges, and measures of success. For example, a diverse and inclusive culture was seen as the necessary foundation for developing highly skilled staff capable of meeting the operational requirements resulting from the merging of 40 organisations, a broader call-out incident mandate, and of a modern fire and emergency service. Furthermore, developing leadership approaches, cultural competency of all staff, and creating a diverse and inclusive organization was also deemed necessary to ensure staff reflect the demographic profile of the wider community and to equip FENZ with the capabilities to better serve iwi and community. At the organisational level, diversity and inclusion is consistently aligned with better leadership, staff engagement and organisational effectiveness. These reasons, alongside the legislative obligations, helped shape the Diversity and Inclusion Policy.

The co-design of the Diversity and Inclusion Strategy drew on collaborative input from staff and their associations and partner agencies and the process involved identifying gaps in current policies, commissioning reports, and engaging with internal stakeholders, experts in

the field, and diversity networks “including Pou Herenga Māori, the National Women’s Development Advisors ... and existing Diversity forums” (Diversity and Inclusion Strategy, 2018 p. 6). This process manifest in identifying four strategic priorities of: 1) building a “foundation of respect, equity and fairness” to facilitate building a shared identity, sense of belonging, and safe workplace; 2) building leadership capability and equipping them with the resources to lead change; 3) building a safe environment for staff to raise concerns by creating links between the Diversity and Inclusion Strategy and a Safety, Health and Wellbeing culture; and 4) strengthening “policy, governance and monitoring to ensure our efforts are effectively measured, reported, and embedded over time” (Diversity and Inclusion Strategy , 2018, p. 7).

Key challenges recognised in the Diversity and Inclusion Strategy included that existing mindsets, power dynamics, subcultures, and differences between groups might cause resistance to change; the need for sustained effort to embed the strategy and shared values to realise behavioural change; the need to build leadership capability to lead change; overcoming scepticism based on prior experiences of tokenism and ad hoc change efforts; change fatigue; and lack of alignment with existing policies. However, the Diversity and Inclusion Strategy (2018) also noted that ‘Fire and Emergency NZ currently is viewed as a highly trusted organisation, and an on-going commitment of diversity and inclusion will be critical to not compromise that position of trust, and the ability to support our people and communities’ (Diversity and Inclusion Strategy, 2018, p. 7). Ways to overcome these challenges included developing senior level leadership buy-in and capabilities, communicating why these values, policies and programmes have been developed, collaborating with internal and external partners, linking the Diversity and Inclusion Strategy to other key strategies, embedding strategy across all levels of FENZ, and establishing clear metrics.

The strategy, supported by the high-level plan and roadmap, details short-term (e.g., six-12 month) and medium-term goals (one to five years) that links specific measurable outcomes to each of the four strategic priorities. For example, a 6–12-month deliverable linked to

respect, equity and fairness is a commitment to undertake a gender pay gap analysis. Deliverables linked to building leadership capacity and accountability include creating a leadership toolkit and reviewing existing leadership capabilities. Empowering an inclusive healthy environment is linked to identifying health and wellbeing through a diversity and inclusive lens; and improving policy and governance is linked to measuring existing frameworks.

Further measures of success were identified, such as 1) evidence that leaders have the capacity to champion change, can lead by example, and have the trust of staff; 2) evidence of an increase in demographic diversity, including improved recruitment and retention rates of minority groups; an increase in cultural awareness and competency throughout FENZ staff; 3) uptake of support services; 4) systematic improvements in terms of feelings of fairness and respect as measured in staff engagement surveys; 5) effective systems for managing bullying and harassment; and, 6) the reduction in the gender wage gap to align with public sector averages and an examination of the causes of the gap in FENZ. Moreover, FENZ set the aspirational goals of being an “active contributor to key public sector Diversity and Inclusion networks and collaborates with other agencies on lessons learned and D&I action planning [and that] [b]enchmarking against diversity inclusion targets (AFAC, SSC, and Diversity Works) is an established annual activity” (Diversity and Inclusion Strategy, 2018, p. 9).

Early successes regarding recruitment were recorded. For example, in 2018, Fire and Emergency New Zealand celebrated a ‘spike’ in the number of women applications (Spike in Number, 2018, August 8). In 2019, FENZ trialled a strength and endurance bootcamp in recognition of a high attrition rate of diverse applicants at the fitness testing phase (Fire and Emergency Celebrates, 2019, March 8)

6.1.3 Fire and Emergency National Strategy, 2019-2045 Te rautaki matua ā-tari 2019–2045: Growing our people Te whakapakari i ō tātou tāngata

The focus on diversity and inclusion is further elaborated in the Section Growing our people Te whakapakari i ō tātou tāngata: of the Fire and Emergency National Strategy Te rautaki matua ā-tari. The National Strategy recognises that “people are at the heart of everything we do” (p. 18). Therefore, to be effective, FENZ needs a well-trained, sustainable workforce capable of serving the community. As part of their national strategy, FENZ explicitly link creating a respectful, inclusive, safe, and welcoming culture and environment to their ability to attract and retain a diverse workforce that reflects the communities they serve. They also explicitly link attracting and retaining a diverse workforce to training and development opportunities that meet current and future roles, flexible career options, and equipping people with the resources to perform their jobs

6.1.4 Pregnancy and Operational Firefighting Policy

The Pregnancy and Operational Firefighting Policy accounts for the health and safety considerations associated with and particular to operational activities. The aim of the policy is to “reduce or eliminate exposure to potential hazards and operational activities that may place you, your unborn child, colleagues, or the public, at risk [and] provide a safe and supportive work environment and prevent discrimination” (Pregnancy and Operational Firefighting Policy, 2019). The policy sets out the responsibilities of those who are pregnant in operational roles and their managers. The policy enables alternative work to be offered during pregnancy, ensures the protection of jobs while on leave, and sets out return-to-work protocols.

6.2 Beyond the Shaw Report

In her independent review of FENZ, Shaw (2019) identified that bullying and harassment were endemic across all levels and worksites and that targets, bystanders and the organisation are negatively affected by bullying and harassment. The Report also identified

that, among other things, bullying and harassment was enabled by subcultures, status of the harasser, leadership, and fear of reporting unwanted behaviour. FENZ accepted all 33 recommendations made in the Shaw Report and has since worked towards implementing these recommendations. Here we review the three outcomes of The Positive Workplace Action Plan 2019; the Bullying, Harassment and Victimisation Policy (6 August 2020); and the Positive Workplace Culture Progress Reports.

6.2.1 The Positive Workplace Action Plan 2019

The Positive Workplace Action Plan 2019 identified eight priority areas and a road map to implement the 33 recommendations designed to address bullying and harassment and to create a positive workplace culture. The eight priorities include creating a Behaviours and Conduct Office and a comprehensive bullying and harassment policy, developing and living a set of shared values and code of behaviour based on FENZ values/Ngā uara (Kia Tika/do the right thing, Manaakitanga, serve and support, Whanaungatanga, we are better together, and Auahatanga, strive for improvement), and on building a culture of mutual respect; supporting leadership and staff to create “safe, respectful and inclusive workplaces” (FENZ, 2019, p. 1), revising existing programmes, policies and procedures, and building a programme of engagement throughout FENZ.

6.2.2 Bullying, Harassment and Victimisation Policy (6 August 2020)

The purpose of the Bullying, Harassment and Victimisation Policy is to create safe workplaces at FENZ that are free from bullying, victimisation and harassment and to articulate that unacceptable behaviour will not be tolerated. The policy is specifically designed to support FENZ commitment to “being an effective and sustainable organisation with a culture of mutual respect”, and their values/Ngā uara of Kia Tika/do the right thing, Manaakitanga, serve and support, Whanaungatanga, we are better together, and Auahatanga, strive for improvement (FENZ, Bullying and Harassment Policy, 2020, p. 2).

The policy defines bullying, harassment including sexual and racial harassment, discrimination, and victimisation. These definitions are supported by illustrative examples of inappropriate behaviours and of behaviours that would not typically meet the threshold of bullying, harassment or victimisation. Importantly, this policy articulates the complaints process, sets out accountabilities for leaders, managers and employees/volunteers, possible outcomes of upheld complaints, and contact details of internal and external services available to support those affected by bullying, harassment or victimisation. The Bullying, Harassment and Victimisation Policy also defines and identifies clear roles for bystanders and upstanders in FENZ commitment to create safe working environments. For example, bystanders and upstanders may be in a position to call out inappropriate behaviour, speak to and support victims of inappropriate behaviour, and/or report inappropriate behaviour.

6.2.3 Positive Workplace Culture Progress Reports

To date, FENZ has published four six-monthly Positive Workplace Culture Progress Reports (April, 2021; October, 2020, April 2020, and October, 2019). These six-monthly Progress Reports celebrate FENZ achievements in the eight priority areas as identified in the Action Plan, and provide a road map for continuing the journey towards creating a positive culture and inclusive work environment. Over this time, their work includes creating the Behaviour and Conduct Office charged with developing, refining and launching policies, practices and processes regarding organisational values, bullying and harassment. This work has involved consulting, collaborating and holding hui with unions, associations, Afi Pasefika, Pou Herenga Māori, and Women in Fire and Emergency (WFENZ) for the purpose of developing shared codes of behaviour, strengthening and embedding shared values, and identifying the best ways to support staff.

Specific examples of FENZ work in this space include the establishment of the Positive Workplace Culture team in 2019 following the release of the Shaw Report (2019). This team was charged with the responsibility of designing policies and practices to implement the 33 recommendations set out in the Shaw Report (FENZ, 2019). Some examples of the initiatives

reported in the April 2020 Report include launching the Respect and Inclusion video campaign and training programme and establishing the role of National Manager, Workplace Culture and Change to lead the implementation of the action plan. By the October 2020 Report, FENZ had developed the Code of Behaviour further by creating above (acceptable) and below (unacceptable) line behaviours to support the development of safe working environments and reduction in bullying and harassment. In the most recent October 2021 report, FENZ continued the programmes of supporting staff by launching a wellness programme throughout FENZ, and holding a two-day hui on Respect and Inclusive Leadership attended by 70 trainers and people leaders.

In 2021, FENZ reported on the formation of and development of the Whiria te Tāngata, Fire and Emergency's Rainbow Network. This network is for anyone who identifies as SOGIESC and as an ally of those identifying as SOGIESC; and has the aim of increasing "visibility, inclusion and participation of people with diverse sexual orientation, gender identity and expression, and sex characteristics in Fire and Emergency" (Positive Workplace Culture Report, April 2021, p. 26). Key achievements include becoming active members of the Respect and Inclusion Taskforce and helping develop guidelines, collaborating with the Cross-Agency Rainbow Network (CARN) (including NZDF and Police), being present at the Auckland and Wellington Pride Festivals, and developing policy.

6.2.4 Focus on FENZ Women in FENZ April 2020, Oct 2020, April 21 Progress Reports

Since the Shaw Report, the actions to create a safe and inclusive employment environment for all, as briefly reviewed above, have been augmented by actions targeting women and by the actions of FENZ wahine to support the implementation of the 33 recommendations. The Women in Fire and Emergency (WFENZ) network has also been at the vanguard of change aimed at enhancing women's positive employment experiences. The WFENZ network recognises and seeks to address the small number of women in operational and leadership roles. To do so, they have the aims of ensuring women feel safe and included and seek to

“support, connect, retain and develop women across Fire and Emergency” (Positive Workplace Culture Report, April 2020, p.29).

The WFENZ network is recognised by leadership and the unions, and from the outset, have participated in various Task Forces, networking events, and hui; and have supported national and regional leadership to design and to disseminate policies that facilitate creating a positive, safe, and inclusive workplace culture for all. For example, WENZ was involved in the Respect and Inclusion Task Force and provided input to the design of the Code of Behaviour and in the reviews of the Pregnancy and Operational Firefighting Policy. WENZ has also delivered workshops on bullying and harassment, respect and inclusion, and the Crew Conversations pilot involving facilitated discussions on brigade behaviour (see Positive Workplace Culture Reports, April 2020, October 2020, and April 2021).

Among WFENZ’s achievements was the creation and continued development of the “National Women’s Advisory Committee (NWAC) and Regional Women’s Advisory Network (RWAN) in each of the five regions” · The NWAC supports national and Regional Leadership Teams (RLT) and attends RLT meetings. In 2021, they met with the Minister for Internal Affairs to discuss the challenges of being a woman in the fire service and the work being done to support women (see Positive Workplace Culture Reports, April 2020, October 2020 and April 2021).

Each year, WFENZ celebrate International Women’s Day. For example, in 2020, the network showcased the many roles held by women at FENZ, and in 2021, hosted localised events and held a national video conference showcasing participants experiences, practices that had worked and ideas to “better support and empower [FENZ] women to succeed” (Positive Workplace Culture Report, April 2021, p.26). As a result of the work by Women in Fire and Emergency NZ, FENZ report “seeing a positive shift in how people are engaging and supporting women across the organisation” (Positive Workplace Culture Report, April 2021, p.26).

7 Directions for Future Research

While research about women within fire and emergency has increased, there is still a recognised gap between the studies that address gender issues in fire and emergency services with those that highlight the voices and experiences of women in fire and emergency specifically (Batty & Burchielli, 2011; Beatson & McLennan, 2005; Clarke, 2018), and fire services (MacDonald, 2019). Moreover, there is a significant gap in studies that explore a wider perspective on gender diversity, including moving beyond binary understandings of gender, and to other gender-based intersectionalities, such as ethnicity and sexuality. While the recent Scott (2021) report did touch on career barriers and enablers within FENZ, all participants were men. Therefore, the career experiences and expectations of women members of the fire and emergency workforce from an intersectional perspective is the first and most significant identified gap.

Most large-scale studies are quantitative studies that employed surveys as their main data gathering method (e.g., Hulett et al., 2007; Watkins et al., 2019), with some of these utilising interviews as a secondary stage (e.g. Parkinson et al., 2019). There are several qualitative studies, with most of these gathering data through in-depth semi-structured interviews and only a few through focus groups (Ainsworth et al., 2014; Parkinson et al., 2019). What stands out is that the qualitative studies reviewed tend to have small sample sizes (around 20 participants) (e.g., Batty & Burchielli, 2011; Yoder & Berendsen, 2001). Some of these qualitative studies also focus on a specific sub-section of the workforce (e.g., African-American women (Yoder & Berendsen, 2001), or Victoria-based women (Batty & Burchielli, 2011). Given the nature of the challenges experienced by women, and the noted complexities in the experience within fire services, the targeted sample composition within the previous qualitative studies represents a distinct gap in current studies. It is suggested that future research combine quantitative and qualitative research methods and include multiple demographic features within the qualitative samples to better represent the wider FENZ workforce, and the communities it serves.

In terms of representation across geographical areas, thus far, most of the research focusing specifically on women firefighters has taken place in the United States, the United Kingdom and Australia (Gouliquer et al., 2020); very limited research has taken place that focuses specifically on women in New Zealand. It should also be noted that many of the Australian studies focus on a specific region (e.g. Victoria). Therefore, the third research gap involved research on the career experiences and expectations within a New Zealand context.

In relation to the topics covered in studies, the small overall volume of studies focused on gender issues tend to focus either on recruitment and motivation (why women join the force, or what impedes them from joining) (e.g., Malinen et al., 2019; McLennan et al., 2007), or on issues experienced within the force (e.g., Batty & Burchielli, 2011; Rosell et al., 1995). The first group provides limited information on the actual experiences of women within the service. While the second group provides valuable information on barriers and restrictions experienced, a fourth gap is in studies that take a strengths-based approach and ask women firefighters about what they need to have a fulfilling experience and career within the service. Questions that focus on what constitutes a positive experience will lead to different insights than those that solely focus on what constitutes a negative experience.

In addition, there is fifth gap in terms of women's perspectives on their health and well-being needs within fire and emergency services (McQuerry et al., 2019; Watkins et al., 2019). This also includes health issues and risks in relation to female physical and gynaecological health. Anatomical and physiological differences between sexes present specific risks and requirements that require further investigation (Batty & Burchielli, 2011; Watkins et al., 2019).

Therefore, to conclude, future research directed at more comprehensively understanding this issue, to develop organisational responses to meet the goal of FENZ representing the communities it serves, would constitute:

- The career experiences and expectations of diverse women and gender-diverse members of the fire and emergency workforce within a NZ context
- A large-scale (approx. 120 pax.) qualitative study
- Taking a strengths-based approach
- Including a wide range of factors, including health and wellbeing needs

8 Conclusion

This report has provided a systematic and updated review of previous research on women's career progression in male-dominated industries, a review of international literature examining women's experiences in fire and emergency services, and Fire and Emergency New Zealand (FENZ) research on women's experience within the organisation. This review identified five gaps in the current literature as this relates to women's experiences in fire and emergency services. These gaps represent an opportunity for future research that aims to facilitate the realization of FENZ aspirations to be a diverse and inclusive place to work.

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9 Appendix 1: Table of Research Process

Phase	Aim		Search Terms	Data set (n)
1.	To review research in the area of women in male dominated industries, as a larger field within with F&E sits	Academic Journal Articles & Government and intergovernmental reports	*women AND male dominated *gender AND male dominated	43
2.	To review research in the area of women in Fire & Emergency globally	Academic Journal Articles	*women AND fire services *women AND firefighters *women AND emergency services *Gender AND fire services *Gender AND firefighters *Gender AND emergency services	34
3	To review previous FENZ commissioned research	FENZ provided Reports	N/A	25
4	To review FENZ policies related to women's career progression	FENZ policies	N/A	13

Appendix 2: Table of Previous FENZ/NZFS Research

Title	Year	No.	Author(s)	Topic/Objective	Sample & Method	Findings and Recommendations
<p>Developing a strategy to nurture, enhance, and expand the Volunteer Fire Brigade</p>	2001	23	UMR Research	<p>To develop a profile of volunteers in the NZFS (motivation to join, expectations of job, quality of relationship between volunteer and paid personnel) and to provide direction for strategies that will nurture, enhance and expand the volunteer fire brigade movement, including increasing the number of Maori and female volunteers.</p>	<p>Qualitative phase: focus groups with Maori urban volunteers, rural volunteers, urban volunteers and volunteers from other organisations. Twenty depth interviews were also held with paid fire service personnel. Interviews were also conducted with volunteers from both the rural and urban divisions of the fire service. Ten depth interviews with former volunteer fire fighters.</p> <p>The quantitative phase: survey of 500 volunteer fire fighters, including 300 urban volunteers, 150 rural volunteers, and 50</p>	<p>The report offers limited insight into the female (or Maori) experience. It does mention the following: Male volunteers said they welcome women volunteers, as long as they can hold their own on an incident (this contradicts other reports and experiences of women); several volunteers said it is sometimes difficult to be a female fire fighter. Depending on brigade, "women do encounter discrimination, macho attitudes, and an "old boys' club" that can make it difficult for them to be effective"; while none of the males said that they do not think women should be fire fighters, "there were</p>

					<p>volunteers from composite brigades. A representative sample of urban volunteers was selected from each of the eight New Zealand Fire regions: Northland, Auckland, Bay of Plenty/Waikato, Eastern, Western, Arapawa, Transalpine, Southern.</p>	<p>signs that women are not on an equal playing field with all of their colleagues." Several volunteers noted that being a female volunteer fire fighter seems to be easier when there are several other women in the brigade. In terms of recruitment: After about three months, most brigades vote on the membership of new recruits. While volunteers said it is rare to vote someone out who has made it to this point, but they believe it is an important component of the recruitment process: they can raise any concerns about a new team member, this allows them to "maintain an element of selectivity in the recruitment process because it is an important way of maintaining the standards and public image of the brigade." In later reports however, this voting process was said to be a hurdle in recruiting females into some brigade. There is no mention of that</p>
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						<p>here. Maori experience: giving back to their community was an important facet of being a volunteer; the camaraderie they experience is extremely important; Maori volunteers did not say they have experienced a lot of discrimination in the fire service, although several Maori volunteers did describe individual incidents; the survey showed that 47% of volunteers agree there should be more fire fighters from ethnic minority group but notably, 18% of volunteers disagreed with this statement. Some of the official/main findings of the report: 1) Overall, New Zealand's volunteer fire fighters rate their time spent as volunteers highly; 2) Competing pressure between home and volunteering is biggest challenge when it comes to retention; 3) NZFS management is seen as "bureaucratic", out-of-touch with</p>
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						<p>volunteers - rural volunteers felt no relationship with NZFS at all- and has little consistency on national level; 4) Issues between paid and volunteer staff are present and they could be bettered with ensuring that both paid and volunteer fire fighters are treated the same; and joint-areas meetings between Chiefs from both paid and volunteer units could help build lines of communication between brigades. Interestingly, while not mentioned as a main finding, there is a mention of brigade moral and 'politics' and that problems often reflect the leadership styles of the chief and other officers. They emphasised the importance of a chief who has good people skills and not just fire fighting experience in maintaining morale.</p>
Advancing the recruitment and retention of women	2002	No number	Brough, P., & Smith, M.	Evaluation of practices and systems influencing NZFS female fire fighter recruitment and	NZFS staff, HR and managers, similar personal at other (international) fire	<p>Findings and recommendations:</p> <ul style="list-style-type: none"> • Some recommendations about recruitment approach: continue

<p>within the New Zealand fire service</p>				<p>retention: 1) assessment of recruitment practices, systems and materials in relation to female fire fighters , 2) evaluation of recruitment campaign materials and its attractiveness, 3) comparative evaluation of recruitment practices in other emergency service organisations, 4) evaluation of female recruitment practices in international literature</p>	<p>organisations. Incl. career and volunteer female firefighters (fff). Note: NZFS career firefighters were reluctant to participate. Did not want to be 'singled out' as 'special group'.</p>	<p>female targeted recruitment and enhance visibility of fff in public view</p> <ul style="list-style-type: none"> • Issues in the selection process need to be addressed: a review of the process and practices are needed to ensure there is more equality, standardisation and consistency in the process (so discrimination is less likely); assessors to ensure equality between candidates; one female to be present with each assessment; provide more realistic understanding of female fire fighters reality • There is a lack of acceptance: Espoused female friendly values during recruitment disappeared once in job. Lack of positive encouragement, persistent attitudinal differences & inappropriate behaviour by male firefighters ; A need for buddy scheme for female fire fighters; Implement education programmes to promote diversity and awareness
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						<ul style="list-style-type: none"> • Need to acknowledge station's officer's role in female acceptance: Perceived scrutiny to those taking higher level positions. • Female progression: lack of females in higher level positions • Facilities are not fit for purpose for females • There are no data about sexual harassment at FENZ: Need research and record levels, experience and consequences of sexual harassment within FENZ. • In 2002: 1.62% of career ff is female; 10.34% of volunteer ff is female • Female participation in police is markedly higher • Other recommendations: <ul style="list-style-type: none"> o replace steel gas bottle with lighter version; uniform adjustment o one female assessor included in all practical assessment courses o continue female targeted
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						<p>recruitment and enhance visibility of fff in public view</p> <ul style="list-style-type: none"> o buddy scheme for female firefighters o acknowledge station's officer's role in female acceptance o offer longer maternity leave o a review of NZFS selection system: more equity in systems and more detailed selection exercises (no discrete test criteria for men and women; PAC assessors to ensure equity among candidates) o implement education programmes to promote diversity and awareness o should consider an anthropometric study of fff o commission and publish research recording levels, experience and consequences of sexual harassment with FS. This is currently rare.
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<p>The New Zealand volunteer fire service in 3 rural communities in Northland</p>	<p>2002</p>	<p>34</p>	<p>Johnstone, W.</p>	<p>The overall aim was to gather information that will facilitate the further development of an effective fire service in rural communities in New Zealand: a) Provide a profile of fire service volunteers in each of the communities in the study area b) Gauge the level of community competency toward the local fire provision, c) Document the challenges that hinder effective fire provision, d) Document the challenges that hinder effective fire service provision associated with rural isolation.</p>	<p>Small sample, mostly Maori. A total of fifteen rural fire partly volunteers participated in this research. Eighty seven percent of all volunteers self identified as Maori.</p>	<p>Official recommendations:</p> <ul style="list-style-type: none"> • Formulate a culturally appropriate ‘mentoring program’ to recruit local younger community members as rural fire volunteers • Separate management and governance roles of local fire units • Employ a volunteer on a pro rata basis to position of manager for the 3 combined rural fire parties <p>Not highly relevant for study: This project was part of a larger effort to understand and counteract the high incidence of Maori fire fatalities in Aotearoa/ New Zealand.</p>
<p>Recruitment and retention of women volunteers within the fire service.</p>	<p>2003</p>	<p>36</p>	<p>UMR Research</p>	<p>Develop a profile of female volunteers in the New Zealand Fire Service including:</p> <ul style="list-style-type: none"> • exploring their motivations for joining • expectations of the job 	<p>Volunteer focus.</p> <p>Sample (both rural and urban):</p> <ul style="list-style-type: none"> • Orientating phase: Regional Commanders; Volunteer Chiefs ; Volunteer Support Officers; 	<p>Findings and recommendations:</p> <ul style="list-style-type: none"> • Perceived barriers to joining: Male dominated environment that does not accept women/whether male volunteers would accept them; Physical limitations – also, too old;

			<ul style="list-style-type: none"> • quality of relationship with the New Zealand Fire Service Commission. • provide direction for strategies which will aid in the recruitment and retention of women in the fire service. 	<p>Permanent female fire fighters</p> <ul style="list-style-type: none"> • Focus groups: existing volunteer women fire fighters, potential volunteer women fire fighters • Telephone survey: women volunteer fire fighters 	<p>may let team down; family responsibilities (too dangerous when you need to look after family)</p> <ul style="list-style-type: none"> • Need for more realistic understanding of the work • Most women were of European background (86%), with a representation of Maori similar to the wider population (14% Maori). • Experienced challenges by women: <ol style="list-style-type: none"> 1. Physical challenges of role: Particular training exercises are difficult for women to perform. In brigades where male colleagues were supportive this issue was not a problem but in brigades where male colleagues were more critical of their women counterparts, some felt pressure to try to match their male colleagues regardless of any physical limitations. 2. Sexism and male acceptance: Not being accepted as easily as a male would be. Women having to prove
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						<p>themselves more than a male; sexism; male chauvinism in the higher ranks; Some considered ribbing from male recruits a major concern, although most felt this had improved as women had increased in numbers. Some older recruits noted they had to “suffer” quite heavy ribbing in their “early days”, many of whom felt women with less “strength of character” would have left the service as a result. The view was expressed by some volunteers that there were brigades that would never vote to accept a women volunteer, or which would make the training experience so difficult that women would be unlikely to complete it (“it’s a secret ballot you see”); jokes were often considered, by some volunteers, excessively crude. Likewise, while most admitted to swearing themselves, the obscene language used by some male volunteers was</p>
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						<p>viewed as quite offensive;</p> <p>3. No separate female facilities (at station): “e.g. toilets. According to the report “most had grown to accept their absence”</p> <p>The report suggests that the following ways were found effective in dealing with the challenges above</p> <ul style="list-style-type: none"> • Many women volunteers felt that the best way to deal with any issues was to confront it directly (‘make a stand’) – But the comments in the report basically indicate that these women could not take it anymore and blew up. Confronting it directly seems to be an incorrect observation. • A number felt that working hard to equal, or better, their male counterparts, and showing the different skills women had to offer had eased earlier tension. • Quit: Finally, while women may put up with difficulties in a paid role, it
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						<p>was often considered not worth the bother as a volunteer, being easier to quit rather than to try to change entrenched attitudes.</p> <p>Other observations:</p> <ul style="list-style-type: none">• The choice of Fire Chief was considered crucial to overall station morale, there was an assumption that as older men retire, there will be more overall acceptance of women. <p>The choice of Fire Chief was considered crucial to the overall atmosphere of a station, and most felt that it was important that the selection process was thorough and based on the appropriate criteria. It was also suggested that someone independent should periodically check up on each brigade or fire force to ensure standards were being maintained.</p> <ul style="list-style-type: none">• Some were concerned that male volunteers would view any 'extra support' as favouring women
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						volunteers, thereby causing a further rift between the genders in their brigade.
Assessing and selecting high performing Fire Service recruits for the future	2003	43	Cerno Limited	The New Zealand Fire Service (NZFS) identified the need to review the process for assessing and selecting recruits, to ensure it selects the best applicants for the firefighter role.	A range of information sources were used to assess the NZFS's current firefighter competencies and selection process: a) Literature review. b) Workshop with NZFS subject matter experts (16) to identify the skills, attitudes, and abilities that differentiate excellent firefighters from average firefighters. c) Survey of senior NZFS staff.	They provide a range of recruitment and assessment recommendations, among which the repeated recommendation to provide interviewers/assessors with clear instruction on how to conduct the interviews and assessments, to ensure assessment consistency and accuracy. Some issues related to inconsistency in recruitment and assessment that are mentioned in other reports, and which could be the basis for discrimination and exclusion, were highlighted here.

<p>Puipuiaga: Effective fire safety strategies for pacific peoples</p>	<p>2006</p>	<p>60</p>	<p>Tiatia, J., Kingi, P., Ranki</p>	<p>To the knowledge of the investigators, this is the first research in Aotearoa/New Zealand specifically for and by Pacific people about Pacific fire safety knowledge, awareness and behaviour. The project aimed to</p> <p>a) Identify Pacific social trends and their impact on the fire risk, awareness and fire safety behaviours Pacific households.</p> <p>b) Provide data for evidence-based policy advice about Pacific fire safety attitudes and behaviours. c) Identify ways that will enable the NZFS to engage meaning- fully with Pacific communities) Identify ways of increasing the proportion of Pacific people in the NZFS.</p> <p>e)Identify strategies to improve Pacific peoples’ fire safety.</p>	<p>This study included –</p> <ol style="list-style-type: none"> 1. A survey of 190 Pacific peoples in Auckland, Wellington and Christchurch 2. Face-to-face interviews with 15 key informants. 3. Four focus group discussions, one each in Auckland and Wellington and two in Christchurch. 	<p>Not highly relevant for study: This project was part of a larger effort to understand fire safety knowledge, awareness and behaviour in Pacific peoples. One of the recommendations was for the NZFS to engage with Pacific people when creating policy for them. This may be relevant in the context of for creating policy around female recruitment and bettering the experiences of females within the fire service. At the moment the sampling (who gets asked) predominantly among those who are already or still in the force - which limits the findings.</p>
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NZFS research among people with physical and sensory disabilities	2007	68	UMR Research	To explore current fire safety knowledge among people with physical and sensory disabilities, gaps in knowledge and barriers that prevent fire readiness.	Qualitative research with some interviews and focus groups	Not highly relevant for study: This project was part of a larger effort to understand fire safety knowledge, awareness and behaviour.
Evaluation of the NZFSC programmes, promotions and research for Maori	2008	85	Kaiwai, H., Kerr, S., Jensen, V., Gregory, A., & McCreanor, T.	The evaluation includes the following key aims and objectives: 1. Research to review the effectiveness of fire safety education programmes aimed at promoting awareness and knowledge around fire safety in Māori communities. 2. To evaluate the quality and utility of the NZFSC's research outputs in relation to Māori communities. This will include: Identifying any barriers to the uptake and utility of currently available research commissioned by the NZFSC	Interviews, document review, media review, telephone survey; street based 'intercept survey' and an online survey were conducted and results assessed.	They investigated (among others things) barriers to the uptake and utility of currently available research commissioned by the NZFSC in relation to Maori. While there is a considerable volume of research commissioned by NZFSC, they note that the lack of quality evaluation research that looks at the effectiveness of the projects and interventions is a considerable problem. The key barriers to the uptake of research that they observed were the designated time that NZFSC staff can dedicate to reading research reports, and possibly issues with practical accessibility and readability

				Identifying any gaps and providing any necessary updates to the research		of materials. They suggest for NZFSC to review its research needs with the end beneficiary in mind, and to make an effort to disseminate research in accessible formats to staff.
Measurement of rural fire fighter physiological workload and fire suppression productivity	2008	92	Parker, R., Moore, D., Baille, B., Pearce, H. G., & Anderson, S.	This research project aimed to improve the health and safety of rural firefighters by determining, under New Zealand operational conditions, the physiological workload of firefighting tasks.	Literature review and physiological monitoring	There was no distinction made for the female/male experience. No relevant insights for this research study.
Validation of the firefighter recruitment and selection programme	2009	96	Wright, S., & O'Driscoll, M.	In 2003 the New Zealand Fire Service (NZFS) adopted a competency-based recruitment programme to select trainee firefighters (New Zealand Fire Service Commission, 2003a). The current study measured the effectiveness of the selection tests against new recruits' performance on the job. This report presents the results of the	Several methods of data collection were used to conduct this study: 1. Literature review on firefighter performance criteria 2. Interviews with NZFS subject matter experts 3. Observation studies to ascertain performance criteria 4. Performance ratings	Follow up from report 43. The results of the study suggest that the information collected in the application form, the Standard Progressive Matrices cognitive test score, and the interview scores are the best predictors of overall firefighter performance. The information collected from the self-assessment, the ACER cognitive tests,

				study and discusses potential improvements in the way firefighter applicants are assessed during the recruitment and selection process.	collected from NZFS recruit supervisors	the physical pre- entry test scores, and the scores from the practical assessment course did not predict overall firefighter performance. Although not predictive of job performance in this particular study, we recommend continuing to run the physical pre-entry test and the practical assessment course to ensure completeness of selection testing. These tests will also provide the candidates with a realistic preview of the physical and applied skills required for the role of firefighter. No findings specific to gender/female experience.
Metadata analysis of the NZFS Commission Contestable Research Fund	2010	107	Nana, G., Stokes, F., & Molano, W.	Undertake a review of the NZFS Commission contestable research fund. The stated purpose of the fund is to advance knowledge in fire prevention and fire management to meet the NZFS	The research assessment framework established to complete the metadata analysis incorporated economic methodology, principally benefit-cost analysis, with the	They assessed the reports according to two overarching criteria: whether the research was associated with a strategic priority area or areas, and whether the research outputs were applicable to the purpose of the NZFS,

			<p>Commission's statutory interest.</p> <p>Between 1998 and 2010, the fund has commissioned research that has advanced fire prevention and fire management knowledge and resulted in over 100 research reports.</p>	<p>strategic research framework established by CRESA in 2003. As well as cataloguing the data, the metadata analysis therefore considered the change (benefit) that has occurred as a result of the research.</p>	<p>or there was a link between the outputs and the operational responsibilities of the NZFS, in terms of fire safety, fire prevention, and fire extinction. They found that overall, the contestable research fund is meeting its stated purpose to advance knowledge in fire prevention and fire management in New Zealand to meet the Commission's statutory interest as laid out in the Fire Service Act 1975 (Part II). The research being funded is closely aligned to both the purpose and the strategic objectives of the New Zealand Fire Service. However, there was a clear lack of research associated with two of the five strategic objectives. To date, only a small amount of research has been completed that meets the strategic objectives to increase the integration between the urban and rural service delivery and develop and protect people, and promote internal</p>
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						stakeholder partnerships. This may be due to the internal focus of these strategic objectives. These two objectives are focused on the human aspects of the NZFS and their internal processes, policy and programmes.
Motivating, recruiting and retaining volunteer fire fighters in rural communities in New Zealand	2013	138	Alkema, A., Murray, N., & McDonald, H.	This research aimed to find out about what motivates people to join and remain a member of the Volunteer Rural Fire Forces (VRFF) in New Zealand.	This research was conducted in three stages, a literature review; a paper-based survey of 354 volunteer fire fighters in 10 RFAs; and case studies of seven VRFFs in four RFAs (Hastings, Tararua, Waitaki and South Canterbury). The case studies involved observations, interviews and focus groups with a range of people including Principal Rural Fire Officers (PRFOs), Chief Fire Officers (CFOs) and volunteers. Information from the literature review was used to inform the surveys and case study	Motivation for joining and reasons for staying differ for women and men. There are motivational differences by age and gender for joining the VRFF. Women are less motivated than men by 'interest in fighting fires', 'excitement and challenge' and in being able to 'educate others'. At the same time, the survey shows that women value the opportunity to gain new knowledge and to develop physically and personally. In terms of staying in the service: there was little difference between the motivations for men and women apart from women being less likely than men to say that 'educating others' was a

				<p>questionnaires. High-level findings from the survey were also used to inform the case study questionnaires.</p> <p>Note: all but one of the women at the case study sites participated fully in fire fighting activities and one of them was the CFO.</p>	<p>motivation for staying. In terms of whether motivations change over time when people are in the service, data from the survey shows there are three areas of difference in the motivations for joining and staying. 'Social contact, 'interest in fire fighting and emergency services' and 'being able to educate others' all increase as people stay. There are small motivational changes by age group and gender. Most notably for gender, 'social contact' increases more for women than it does for men, as does 'educating others' and 'interest in fire fighting and emergency services'. In terms of leaving, the only difference found by gender was that a greater percentage of women than men said that 'moving out of the area' would be a reason for them to leave.</p> <p>There are regional differences for</p>
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						<p>both.</p> <p>There was no distinction made in gender when discussing why people leave or what they like the least. Interestingly there was no mention of any issues experienced by women in the service, maybe because there was only a small percentage of women in the sample: "The findings from the literature, (McLennan & Birch, 2006a; 2006b), show women report very positively on their training experiences, though lack of opportunities for advancement and leadership were seen as barriers faced by approximately 25 percent of women, with many indicating they were told by at least one man in the brigade that women do not belong in the fire service and/or are not capable of the work.</p>
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<p>Minimum fitness recommendations for rural fire personnel</p>	<p>2014</p>	<p>133</p>	<p>Parker, R., Bayne, K., & Clifford, V. R.</p>	<p>The aim of this research was to identify what is the current level of acceptance to, and application of, health and fitness programmes and standards as developed by the NRFA within New Zealand Volunteer Rural Fire Forces; and then to provide the NRFA with recommendations on the minimum standards for health and fitness that can be applied to volunteer rural firefighters, based on the actual tasks performed.</p>	<p>The research was conducted using interviews of Rural Fire Officers (RFOs) and volunteer firefighters; and looking at the physiological requirements of firefighting in case studies.</p>	<p>No recommendations made relevant for topic under study. No differences reported in female experience.</p>
<p>The value of fire stations and the management of relocations from a community perspective</p>	<p>2014</p>	<p>140</p>	<p>Roguski, M., & Gregory, N.</p>	<p>The New Zealand Fire Service (NZFS) commissioned Kaitiaki Research and Evaluation to carry out community engagement research to understand community concerns arising from past station relocations and how</p>	<p>The study employed a participatory qualitative approach and comprised a combination of a thematic and content analysis, semistructured focus groups and in-depth qualitative interviews with key community</p>	<p>The research identified key stakeholders, from a community perspective, that need to be consulted and informed throughout the process from the initial announcement to post-relocation and these included: decision makers and local regulatory bodies, local fire</p>

				these concerns could be better addressed in the future.	stakeholders in three locations in which a brigade had relocated recently: Katikati, Te Atatu and Takapuna.	brigades, affected residents and the wider community. From the findings a number of strategies, corresponding with key points in station relocation, were developed to guide future NZFS station relocation communication with the community. No specific mention of the female experience.
Diversity in the community versus diversity versus diversity in the NZFS: Who is missing and why?	2016	142	Wilson, J., & Scanlen, A.	The New Zealand Fire Service (NZFS) wants its workforce to better reflect the communities it serves. This research aimed to explore differences between the operational and volunteer workforce; the extent to which the NZFS reflects the demographic diversity of New Zealand; barriers to the recruitment, retention and progression of a more diverse workforce; and best practice approaches to enhancing workplace diversity.	A four-phased research programme was developed that involved multiple information sources and a mix of methods, including: <ul style="list-style-type: none"> • a document review • a comparative analysis of NZFS demographic information and 2013 NZ census data • one-on-one and small group interviews with NZFS personnel and other relevant stakeholders • focus groups with NZFS personnel, including operational support staff, 	The findings suggest that the NZFS' workforce is not as demographically diverse as the NZ population. Other qualitative findings found several differences between recruitment, training and progression processes in the operational compared to volunteer workforce. Fire Service and comparable agency stakeholders noted various challenges associated with increasing workplace diversity, including: <ul style="list-style-type: none"> • resistance to changing the status quo • the autonomous nature of the

					<p>volunteer and career firefighters.</p>	<p>volunteer workforce makes increasing and/or enforcing NZFS National Headquarters (NHQ) workplace diversity policies and practices difficult</p> <ul style="list-style-type: none"> • workplace diversity can sometimes result in an increase in conflicts and time required to complete tasks due to cultural differences • the double-edged sword of affirmative action-related programmes (c.f. section 3.5.5.1). <p>Recommendations:</p> <ul style="list-style-type: none"> • harness the organisational culture of the NZFS to drive changes in perceptions and behaviours related to workforce diversity • emphasise inclusion-based values and practices to ensure a culture of respect and support • enhance support for diversity-related groups in the NZFS • consider how diversity in the NZFS can be leveraged to enhance
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						<p>community engagement</p> <ul style="list-style-type: none"> • emphasise greater accountability and buy-in from managers and leaders into diversity- and inclusion-related practices • consider additional training around cultural competency, inclusion and diversity, unconscious bias and communication skills • continue development of current diversity initiatives and transparent appointment processes.
<p>Building quality working relationships across the emergency services sector</p>	2015	149	Roguski, M., & Gregory, N.	<p>Successful interagency partnerships within the emergency sector are vital to ensuring the safety of the New Zealand public. This research aimed to:</p> <ul style="list-style-type: none"> • Provide NZFS with information needed to build quality working relationships across the sector • Inform the implementation of 	<p>The study employed a participatory qualitative approach. The first stage of the research involved a review on national and international literature on collaboration. The second stage of the research involved in-depth semi-structured interviews with key stakeholders across the</p>	<p>The research identified four key areas that contributed to creating barriers to collaboration in the NZ emergency services sector: Response to Major Incidents, Strategic and National Collaboration, Local and Regional Collaboration and Legislation. A number of strategies to enhance collaboration were identified. Many of the suggestions are relevant to</p>

				<p>future joint initiatives in both major incidents and day- to-day operations</p>	<p>emergency services sector. For the third stage of the research a workshop was held with key stakeholders from the New Zealand Fire Service Commission.</p>	<p>improving the quality of day-to-day cooperation and co-location. Recommendations for NZFS and the wider NZ Emergency Services Sector were:</p> <ul style="list-style-type: none"> • Amalgamation of the urban and rural fire services • Collaborative engagement with communities and local volunteers • Develop a mechanism to share case studies of successful collaborations • Refinement of the Emergency Services Chief Executives Forum • Mechanism for post-incident debriefs • Co-location of first responders at a regional and national level <p>No recommendations made relevant for topic under study. No differences reported in female experience.</p>
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<p>How can the New Zealand Fire Service best maximise the potential of its minority personnel</p>	<p>2016</p>	<p>Eleven Fire Departments over four states were visited</p>	<p>Utumapu D., & Utumapu, R.</p>	<p>The focus of this research was on how to maximise the potential of diverse personnel once they are hired in to FENZ. Examined:</p> <p>Processes use to enhance inclusiveness of women and minority staff</p>	<p>Fact-finding tour of USA Fire Departments that included discussions with fire department personnel from recruitment, training officers, directors of training, Human Resources, minority firefighter associations, union representatives, firefighters, fire officers, battalion chiefs and deputy battalion chiefs.</p> <p>Qualitative discussions focused on Aspects of recruitment, induction, retention and specifically promotion to leadership roles</p>	<p>Key Findings:</p> <p>Understanding the difference between diversity and inclusion key to incorporating everyone</p> <p>Importance of coaching and mentoring, both formal and informal, and from early stages of career</p> <p>Different practices are effective in different Station context</p>
<p>Differentiating strong and struggling Volunteer Brigades</p>	<p>2017</p>	<p>150</p>	<p>Bimler, D., Simpson, J., & Brander, P.</p>	<p>The focus of this research was to identify the key factors that differentiate strong and struggling volunteer brigades,</p>	<p>Phase one involved a series of interviews and mapping exercises with 16 internally-nominated NZFS staff, the</p>	<p>No insights specifically to experience of women within FENZ: The research emphasised the need for brigades to be understood as unique units, and in</p>

			<p>then to use these findings to develop a bespoke, brigade profiling tool for ongoing, developmental, internal use. The research was undertaken in three phases.</p>	<p>criteria for internal selection being that nominated participants were considered to have both extensive knowledge as well as experience of volunteer brigades. 220 volunteer brigades were reviewed in this phase. Results showed that characteristics of all brigades could be mapped within 30 key factors, 14 of which typified strong brigades, whereas 16 differentiating factors were identified as typifying brigades which were seen to be struggling. Phase two involved the development and trialling of the Volunteer Brigade Profiler tool (VBP) based on the findings in phase one. A total of 94 brigades were profiled with this tool by 15 internally-nominated NZFS staff. Phase three</p>	<p>going forward suggests a blanket approach or policy may not be a suitable approach to either the management or development of volunteer brigades. Leadership was the single most-reported theme when participants described and contrasted brigades. The most prominent and commonly referred-to characteristics of struggling brigades as described by the research participants were in the following 5 categories:</p> <ul style="list-style-type: none"> • Change resistant brigade • Autocratic leadership • Inflexible leadership • No delegation • Interpersonal conflict
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					involved an extensive statistical analysis of internally-held data on current staffing, including the Dashboard.	
The voice of the family: Research with families of volunteers	2017	159	Duckworth, S., & Sinko, J.	This report recommends practical solutions that FENZ can implement to support families of volunteers . It summarises how families support volunteers to serve their communities, and the impact volunteering has on families. It summarises families' experiences of social activities and support from the brigade and Chief Fire Officers (CFOs). It also summarises national and international literature on best practice interventions to support families of fire and emergency service volunteers. This report was commissioned by the New Zealand Fire Service Commission (NZFSC) during the transition to	Desktop review to identify the existing body of knowledge; they selected brigades that had a high number of callouts, as impacts would more likely to be visible. We included NZFS and NRFA brigades in the research. NZFS and NRFA regional managers were involved in selecting the sites. Thirteen brigades took part in the research; three focus groups and nineteen in-depth and paired interviews with volunteers and their families. Participants included: <ul style="list-style-type: none"> • 27 family members of volunteers (24 female partners, 2 male partners, 1 teenage son) 	Role of family is important and volunteering impacts negatively on family. No specific findings in relation to female experience. A few points of interest in relation to the chief fire officer's role in creating a caring brigade. The authors suggest to "Develop a guide for CFOs on how to build and maintain a family-friendly brigade. The content should draw on best practice and include examples of what brigades are doing that makes their brigade family-friendly. The guide would help CFOs implement suggestions made in the literature on how to support families, such as supporting volunteers and their families in challenging life stages and economising demands on volunteers'

				<p>FENZ. The new organisation aims to merge and modernise New Zealand's fire services and create better support for fire and emergency volunteers. This report includes the perspectives of New Zealand Fire Service (NZFS) and National Rural Fire Authority (NRFA) volunteers and families.</p>	<ul style="list-style-type: none"> • 29 volunteers (21 male volunteers, 8 female volunteers). Eight of these volunteers were couples in relationships with other volunteers; self-completion survey; workshops. 	<p>time. The guide should also include how to welcome and support new volunteers" (P. 8). "Families also make new friends or strengthen connections with other volunteers and families through the volunteer's involvement in the brigade. However, this is dependent on the culture of the brigade, and whether the brigade is welcoming and inclusive of families" (p. 11). "Flexible brigades and strong leadership support healthy family relationships. Some brigades offer flexibility around the requirements for attending training and callouts if volunteers have pressures and demands in their personal or family life. For example, brigades offer flexibility to volunteers who have new born babies, sick parents, or where both parents are working. In these circumstances, brigade leaders promote the 'family first' message in weekly trainings and</p>
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						give volunteers permission to not turn out. This flexibility allows volunteers to remain with the brigade" (p. 15).
Ready to respond: Impact of illness, injury and death incidents on firefighter wellbeing	2018	166	Adams, J., Asiasiga, L., McManus, V., & Dickinson, P.	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.	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.	Findings: 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; Firefighters reported non-fire incidents such as medical calls, motor vehicle accidents and suicides largely had negative impacts on them and their families. Recommendations for improving the environment and culture for firefighters includes continue and/or enhance the recruiting, supporting and retaining of Māori and women firefighters; ensure

						inclusiveness training is provided to all firefighters; build further support for the importance of the medical role among 'reluctant' firefighters; ensure resilience and psychological training is provided to all firefighters; 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'
Young people's perceptions of the firefighter role	2019	168	Duckworth, S., & Thompson, A.	The fire and emergency services have changed dramatically in recent years and was unclear if young people understand the contemporary firefighting role. This report presents an overview of how young people perceive the firefighter role. Fire and Emergency New Zealand (Fire and Emergency) will use the report findings to inform their	Ten focus groups with 38 young people, aged 18 to 22 years and from diverse backgrounds, were conducted to understand young people's perceptions of the firefighter role, their understanding of the skills needed, and the sources of information contribute to these perceptions.	Not much relevance for topic under study: Young women have never considered a firefighting role, do not know how to start applying, and could not see themselves in a role. Most assume women in the fire service work on the front desk, answering telephones and not on the front line. Most say if they wanted the role enough, and trained hard enough they could probably achieve being a

				recruitment strategy. The report will help Fire and Emergency target and encourage skilled and diverse applicants whose qualities align with the role of the modern firefighter.		firefighter. However, they feel that passing the physical fitness test to join Fire and Emergency would be hard and the rate of failure high. Young women feel the fire service has a 'boys club' culture. They think it would be difficult for women to fit in and be respected. In contrast to young men, women consider it would be harder to form trusting friendships with their colleagues.
Diversity in recruitment evidence review	2019	169	MacDonald, C.	This evidence review provides FENZ with a summary of 'good practice' for the design and implementation of interventions to increase diversity in applications and recruits.	<p>Method:</p> <ul style="list-style-type: none"> • Review of recent research literature and industry documents was undertaken to update a limited review already conducted by Fire and Emergency and to inform subsequent interviews. • Interviews were conducted, in person or by phone, with eight individuals from comparable agencies, both in New Zealand 	<p>Findings and recommendations:</p> <ul style="list-style-type: none"> • Fire services worldwide are facing scrutiny over a lack of workforce diversity, with many facing legislative or regulatory mandates to address this issue (e.g. Andrews & Ashworth, 2018). In some cases this has been driven by complaints and reviews of sexual harassment and bullying in the workforce (e.g. Allison, 2014). <p>Findings within the literature:</p> <ul style="list-style-type: none"> • Diversity recruitment can only

					<p>and overseas. The agencies represented included Los Angeles Fire Department (LAFD), Fire and Rescue NSW (FRNSW), Metropolitan Fire Brigade (MFB), Queensland Fire and Emergency Services (QFES), and New Zealand Police.</p>	<p>succeed when incorporated as part of a multi-faceted D&I strategy underpinned by effective change mechanisms. Recruitment alone cannot be expected to drive lasting cultural change. It is not enough to simply recruit more diverse team members, that simply gets more 'difference' in the door (McLeod & Herrington, 2017). Recruits must be supported and developed in a psychologically safe and inclusive environment if they are to be retained and the potential of a truly diverse workforce is to be achieved</p> <ul style="list-style-type: none"> • Resistance to diversity recruitment from within the organisation must be both expected and addressed. Change management initiatives often fail because of poor internal communication and the failure to adequately socialise impending changes. Clear and consistent messaging is needed ahead of, and
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						<p>alongside, wider recruitment campaigns.</p> <ul style="list-style-type: none">• While the common argument for increasing diversity is about better 'reflecting our community' a more useful approach might be to focus on reflecting the modern firefighter role and the different skill set that it requires.• Recruitment initiatives should reflect clear organisational values and have strong leadership support at all levels. Where did that leadership support fail?• Both written and physical assessments can be a source of bias against women and applicants from other underrepresented groups, resulting in a loss of desired applicants (Miller, et al., 201). Skills and merit based assessment of candidates must be applied by eliminating unconscious bias and removing structural barriers
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						<p>(Parkinson, Duncan & Archer, 2019). – same as paper from years ago! -</p> <p>Transparent, validated selection processes are essential to demonstrate that successful applicants have earned their place on merit.</p> <ul style="list-style-type: none"> • Diversity recruitment initiatives and testing processes must be continually measured and monitored to evaluate their impact, to understand barriers to success, and to support ongoing recruitment efforts
<p>Evidence review of effective risk reduction interventions for Māori whānau and communities</p>	2019	170	Simmonds, S.	<p>Te Ratonga Ahi me ngā Ohotata i Aotearoa (Fire and Emergency New Zealand) has a commitment to reducing fire incidence for Māori through effective risk-reduction interventions.</p> <p>This evidence review explores the key features of effective risk-reduction interventions for Māori whānau and communities in</p>	<p>This review takes a Kaupapa Māori approach, where the specific contexts for Māori whānau and communities are explicitly recognised. Māori are recognised as the experts in their own whānau and community and Māori knowledges and approaches are prioritised. A strengths-</p>	<p>Limited relevance to topic under study. Five key values and philosophies to guide the development of behaviour change interventions have been identified in this review. They are;</p> <p>whanaungatanga (relationships), manaakitanga (care and support), reo and tikanga (Māori language and culture) pae ora (vision of wellbeing),</p>

				<p>order to inform risk-reduction messaging and activities of FENZ, and to ultimately contribute to the long term outcome of reducing unwanted fires.</p>	<p>based approach to finding solutions is taken, avoiding deficit-focus, and Māori realities are situated in their historical, political and colonial context.</p> <p>To inform this evidence review, a literature search was undertaken with a key focus on the features of success of behaviour change interventions and approaches for Māori individuals, whānau and communities. The areas of literature included; fire and emergency, accidents, safety (fire, road, water), health (health promotion, long-term conditions, smoking cessation, obesity, gambling, safe sleep), environment (waste reduction), corrections, education (classroom management), and social marketing. The focus was</p>	<p>and tino rangatiratanga (self-determination and autonomy). An outline of behaviour change models and theories is provided, along with an overview of some key behaviour change interventions that have been designed for Māori. A discussion on the limitations and knowledge gaps of available evidence is also provided.</p>
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					largely on New Zealand literature, with a scan of international literature for other indigenous populations. A thematic analysis has been undertaken to develop this report.	
Independent review of fire and emergency New Zealand’s workplace policies, procedures and practices to address bullying and harassment.	2019 (c)		Shaw, C.	Independently review and assess FENZ’s current workplace policies, procedures and practices for addressing harassment and bullying in the workplace. (“The Chief Executive and senior leadership of FENZ recognise that to create an effective and sustainable organisation with a shared identity and a culture of mutual respect, the organisation must create “a positive and inclusive environment for its personnel which is free from bullying and all forms of harassment.”)	<p>Past and present FENZ personnel engaged with the review through an online survey, written submissions, face-to-face interviews, hui and other meetings.</p> <ul style="list-style-type: none"> • Survey w FENZ personnel (1500 people) • 60 interviews w variety of personnel • The review team also attended over 30 meetings with people from all parts of FENZ, including two hui that concentrated on issues relevant to Māori. 	<p>Main conclusions and recommendations:</p> <ul style="list-style-type: none"> • FENZ need to acknowledge that harassment and bullying is an issue. <p>There is no doubt that bullying and harassment is a feature of the FENZ workplace at all levels and across all regions. There are still unacceptable levels of racism, sexism and homophobia. To date bullying and harassment has not been appropriately recognised as a risk nor appropriately recognised and dealt with in the FENZ Safety, Health and Wellbeing Strategy</p> <ul style="list-style-type: none"> • Enablers of bullying and harassment

				<p>The review was able to hear and consider many diverse opinions and views, including (but not exclusively) those from:</p> <ul style="list-style-type: none"> • Rural and urban volunteer and career firefighters (past and present) ; business services; area managers; the senior leadership team; the organisational leadership team; leaders of unions and associations; women in FENZ; Māori personnel at two large hui; trainers and recruits at the National Training Centre; Human Resources and health and safety groups etc. 	<p>should be held individually accountable. The fact that they belong to or are influenced by a particular subculture may enable them to act as they do, but this does not excuse their behaviour. The status of some individuals has enabled them to bully and harass with impunity. The review notes that significant work is being done at senior management level to stamp out this discrimination, but that this work needs to be communicated to all levels of the organisation and sanctions applied where it is warranted.</p> <ul style="list-style-type: none"> • Subcultures have to be recognised, acknowledged and addressed when education and other training initiatives are being planned and implemented: e.g. hero culture, tribal culture (see below) • There are still barriers to reporting this behaviour. FENZ must acknowledge and systematically
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						<p>address these barriers in the same way that it has addressed and largely overcome former barriers to reporting health and safety issues</p> <ul style="list-style-type: none"> • Better practices are needed for complaints + education: Practices for managing issues and complaints of bullying and harassment are not generally well- known nor trusted by FENZ personnel. • Consistent and nationwide policies and procedures are needed: FENZ should review its current policies for dealing with bullying and harassing in view of report and either replace or amend the policies to make them fit for purpose before this part of the integration happens. Those that relate to bullying and harassment lack detail and do not give comprehensive guidelines. • The review concludes that to date bullying and harassment has neither been appropriately recognised as a
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						<p>risk nor appropriately recognised and dealt with in the FENZ Safety, Health and Wellbeing Strategy.</p> <ul style="list-style-type: none"> • There needs to be a clear allocation of responsibility for managing bullying and harassment issues, and implementing the new or revised FENZ bullying and harassment policies and procedures. • Performance Management Measure to be adjusted: For the purpose of addressing bullying and harassment, measures of performance in such a system should include adherence to values and a code of behaviour. • Need for common values that of all its personnel adhere to. • Use of existing reports and initiatives and integrating recommendations of this report in those programmes: The work already undertaken by FENZ has identified the need to integrate processes right across the organisation to reduce
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						<p>duplication.</p> <ul style="list-style-type: none">• Importance of unions and associations needs to be recognised: The unions and associations have expressed unreserved support for this review, and have all committed to support FENZ actively in the implementation of the report's recommendations.• Bullying and harassment needs to be seen in context, this report inevitably deals with the general workplace context.• There is uncertainty what constitutes bullying and harassment. People also wondered if it was not just performance managing.• Leadership issues: Rank and Power: Most people who bully are seniors colleagues, and complaining to someone who outranks you is difficult; The Chain of Command, the hierarchical command and control structure is causing issues. While
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						<p>perhaps appropriate for dealing with fire and emergency situations – it is counter productive to address a bullying culture; Many managers acknowledge that they lack the “soft skills” or “people skills” they need, particularly in dealing with conflict or complaints. (Training is desperately needed for this); As promotion happens based on time and years active, people who become leaders, e.g. station chief, might be good at staying calm under pressure and barking orders but not in creating collaborative or kind cultures.</p> <ul style="list-style-type: none"> • Tribal Culture: Participants referred to tensions between FENZ “tribes” that contribute to or intensify bullying and harassment issues. For example, many volunteers believe that they are not valued by FENZ or career staff who regard them as being less competent at the job. Hero culture: The nature of the firefighting job
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						creates a “hero culture,” in which a degree of bullying is accepted, tolerated, and even expected from the “heroes.” In an environment characterised by a continual exposure to ‘bad studd’ (dead people, injured people from car crashes), there appears to be a reduction of empathy, language of toughness to cope. Intolerance, collusion or acquiescence of unacceptable behaviour, people are often blind or blasé to the effects of their behaviour on others.
Fatigue in firefighting and associated support roles	2020	178	O’Keeffe, K., Zaslona, J., & Signal, L.	A review of the literature on fatigue that is of direct relevance to FENZ. Specifically examining: <ul style="list-style-type: none"> • the impact of fatigue on firefighting and associated support roles within Fire & Emergency New Zealand that 	Literature review	Findings related to female experience in relation to occupational fatigue/shift work: <ul style="list-style-type: none"> • Health risks for female firefighter: some studies suggest that instances of adverse pregnancy, high rates of miscarriage and pre-term delivery

				<p>involve shift work</p> <ul style="list-style-type: none"> • interventions that have been used with firefighters/on-call shift workers to improve fatigue management. 		<p>were high. Both studies mention the possible role of shift work in these outcomes for female firefighters. The researchers argue for further research and the need for policies to protect maternal and child health. Being female also increased the risk of mental health problems.</p> <ul style="list-style-type: none"> • Areas for further research: <ol style="list-style-type: none"> 1) Understanding the fatigue-related risks for Fire and Emergency New Zealand (FENZ) personnel. Considering the health risks identified for female firefighters identified in this review, an additional area of research may be gender differences in risks for volunteer firefighters and potentially, emergency communications personnel. 2) Lack of measurement and data: 'Complaining' is not always 'done', nor is measurement: A fatigue management policy should also declare management commitment to
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						<p>effective fatigue reporting. To effectively manage fatigue within an organisation, there must be a culture in which individuals are comfortable raising fatigue as a concern.</p> <p>3) Leadership commitment and communication: A fatigue management policy is normally signed by an accountable executive of the organisation. This confirms organisational commitment to the policy and clearly identifies who has overall responsibility for fatigue management within the organisation. Clear lines of accountability for fatigue should also be identified. The policy should also reflect management commitment to adequately resourcing fatigue management processes and a commitment to assess and improve fatigue management processes. – Is lack therefore also issue in diversity and inclusions?</p>
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