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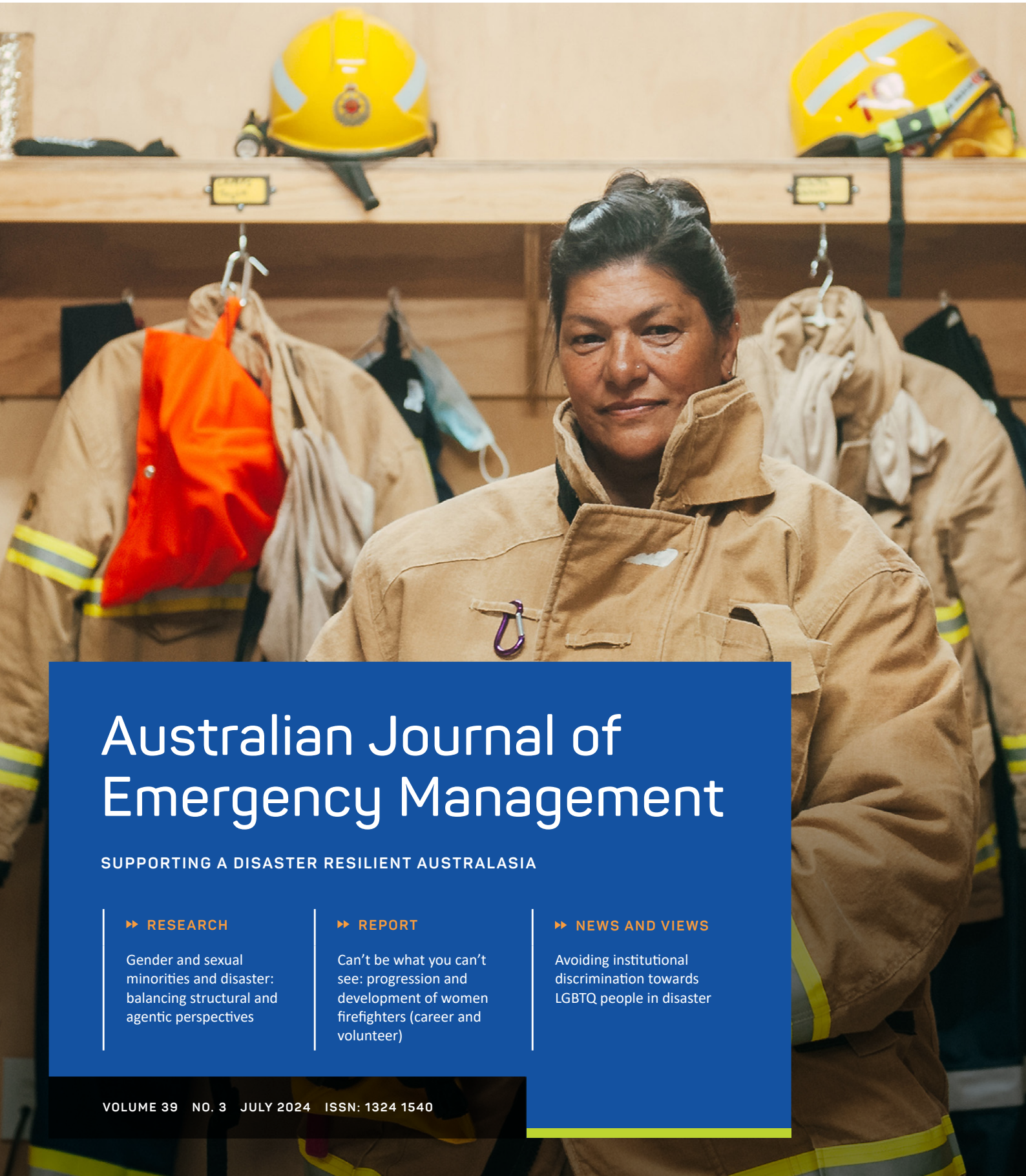

Australian Journal of Emergency Management

SUPPORTING A DISASTER RESILIENT AUSTRALASIA

VOLUME 39 NO. 3 JULY 2024 ISSN: 1324 1540

About the journal

The *Australian Journal of Emergency Management* is Australia's premier journal in emergency management. Its format and content are developed with reference to peak emergency management organisations and the emergency management sectors—nationally and internationally. The journal focuses on both the academic and practitioner reader. Its aim is to strengthen capabilities in the sector by documenting, growing and disseminating an emergency management body of knowledge. The journal strongly supports the role of the Australian Institute for Disaster Resilience as a national centre of excellence for knowledge and skills development in the emergency management sector. Papers are published in all areas of emergency management. The journal encourages empirical reports but may include specialised theoretical, methodological, case study and review papers and opinion pieces. The views in the journal are not necessarily the views of the Australian Government, Australian Institute for Disaster Resilience or its partners.

Aboriginal and Torres Strait Islander peoples are advised that this publication may contain images of deceased people.

Publisher

The *Australian Journal of Emergency Management* is published by the Australian Institute for Disaster Resilience with financial assistance from the Australian Government. The journal is published online at www.knowledge.aidr.org.au.

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Design, typesetting and production: Ann Marie Duane
Print and distribution: Valiant Press

Cover image provided by Fire and Emergency New Zealand.

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Circulation

Approximate circulation (print and electronic): 5,500.

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Contributions in the Research section of the *Australian Journal of Emergency Management* are peer reviewed to appropriate academic standards by independent, qualified reviewers.

Foreword

Dr Debra Parkinson

Gender and Disaster Australia

The capacity of Australia's emergency services organisations could be doubled if traditional and persistent barriers to women and LGBTIQA+ people are removed. Capacity can be further increased if masculinity is recast away from heroism and machismo. Emergency response to events like major bushfires and floods demands 'all hands on deck' and now is the time for the sector to act.

We know emergency services organisations have harmed women and LGBTIQA+ people, and men who don't ascribe to a dominant way of being. Men are part of 'gender' and Bob Pease (referring to Ainsworth et al. 2014) notes that when women demonstrate proficiency in a 'man's job' they may 'experience significant push-back from men. Similarly, in studies in New Zealand and Australia, LGBTIQA+ people were found to be marginalised and excluded through hypermasculinity.

This edition of the *Australian Journal of Emergency Management* takes a gender focus and considers intersectional dimensions that can add weight to gender oppression. I draw your attention to groundbreaking commentaries from Carlie Atkinson and Ruth Rosenhek that beautifully capture 'the challenges faced by First Nations peoples in Australia during disasters (and) emphasises recognising historical trauma, promoting indigenous leadership and integrating this knowledge into emergency and disaster management'. It includes recommendations for the sector and 'stresses valuing First Nations people's resilience, strengths and cultural heritage … for more just and resilient communities'.

Tegan Larin offers a comprehensive and succinct overview of the implications of disasters for women, men and gender and sexual minorities. She notes the contribution of Queer Theory and tensions arising from a 'focus on the individual risks overshadowing the structural dimensions of gender and sexuality'. For example, the binary of female and male, LGBTIQA+, SOGIESC (sexual orientation, gender identity and expression, and sex characteristics). There are tensions regarding the 'right' terms to use, but there is no agreement on what these are. A temptation to say 'people' means analysis of gender discrimination is not possible. Terminology is contested and ever-changing (as it should be) but whatever terms we use, the focus must be first and foremost to acknowledge and address gender discrimination in emergency management.

Pressures are high when disasters hit and recriminations can haunt people. Two articles point out that 'vulnerability' as a concept is fraught. Their insights are compelling: one from a First Nations perspective, the other urges a shift away from encouraging men to express 'vulnerability' to 'authenticity' to allow constructive responses.

Internationally, how do we achieve gender justice in emergency management? The consensus from gender and disaster experts in 6 countries is that, 'Culture has to change and it has to change fast – because our climate is changing and equal representation matters'. The emergency management sector is strengthened when contributions are valued from a range of people. It is not money that's needed, but a change of mind and zero tolerance for violence and discrimination.

The Australian Institute for Disaster Resilience acknowledges the effects of disasters on people and communities. Collaboration with the organisation has amplified our gender and disaster message to the sector, and, in turn, has increased understanding of the escalating challenges for emergency services organisations. It is a challenge facing the entire country.

The *Australian Journal of Emergency Management* is a leader in bridging the worlds of academia and emergency management practice. This edition will help take on the challenge. I commend this journal's long-standing commitment to communicating across theory and practice and its attention to the lived experience of disasters and emergency management.

Foreword

Dr Margaret Moreton

Australian Institute for Disaster Resilience

Throughout my career, I have held leadership positions in male-dominated environments. I have on occasion been the only woman in the organisation's leadership team and have had to deal with the view that women are 'emotional' leaders, and that this is a negative thing. I worked in and, for a short time, led the National Office for Women within the (then) Department of Families and Community Services. Today, I am honoured to be the Executive Director at the Australian Institute for Disaster Resilience (AIDR).

Throughout my working life I have learnt that advocating for gender equality provides benefits to individuals, organisations, communities and regions. There are many sources of evidence of the value of gender equality, including the *Global Gender Gap Report* that states that gender equality is not only a fundamental human right, but is linked to a country's overall economic performance.[1] It is also the case that in the work of disaster risk reduction and resilience, gender and disaster risk are inextricably linked. The United Nations Office for Disaster Risk Reduction states that the climate crisis is not gender neutral, and that gender inequality coupled with the climate crisis is one of the greatest challenges of our time.[2] As with other marginalised groups, women are less likely to survive and more likely to be injured when disaster strikes, and they face increased risks of family violence during and after disasters.[3] And yet, alongside the increased effects, is increased action by women in recovery and resilience at the community level.

In Australia, we are seeing natural hazards and extreme events such as bushfire and floods becoming more frequent and intense. Globally, the number of disaster events is projected to reach 560 a year by 2030, equating to an average of 1.5 disasters a day.[4] Each of these events will affect different communities, comprised of different people, who have different needs and strengths. Understanding, accepting and advocating for diversity in these communities supports inclusive and effective responses.

Gender diversity, of course, extends beyond the gender binary to include LGBTIQA+ people, and so too does the focus of this edition of the Australian Journal of Emergency Management. Intersectional factors, such as cultural background, disability, and socioeconomic status, all influence how a disaster is experienced. Thus, this edition includes articles that highlight inclusion and diversity more broadly, and we hope this body of knowledge supports practitioners to consider the diversity of people in a future of increasingly intense and frequent disasters.

A recurring theme throughout this edition is the value of inclusive disaster preparedness and planning. Supporting women to be participants and leaders can be a positive influence for inclusive policies and practices for everyone. This vision is reflected in the *Gender Action Plan to Support Implementation of the Sendai Framework for Disaster Risk Reduction 2015*–2030 (Sendai GAP)[5] that aims to substantially increase gender-responsive disaster risk reduction by 2030. Similarly, supporting all genders and other diverse groups in disaster risk reduction and resilience efforts is essential if we are to create positive outcomes for everyone.

To achieve significant risk reduction and to support thriving and resilient communities, we must interrogate the barriers to anyone's participation and leadership in emergency management. This needs to be from the fire station to the community consultation table and from the local schools to the policy environment in the halls of government.

We at AIDR are proud to work alongside Gender and Disaster Australia (GADAus) to develop this special edition of the journal, and encourage readers to continue to engage with their guidance, resources and training to reinforce a foundation of gender-inclusiveness in our approach to reducing disaster risk and strengthening the resilient communities we serve.

1. Global Gender Gap Report, World Economic Forum www.wgea.gov.au/publications/gender-equality-business-case
2. UN Women, Explainer: How gender inequality and climate change are interconnected: www.unwomen.org/en/news-stories/explainer/2022/02/explainer-how-gender-inequality-and-climate-change-are-interconnected
3. Tricia Hazeleger, "Gender and Disaster Recovery: strategic issues and action in Australia" https://knowledge.aidr.org.au/resources/ajem-apr-2013-gender-and-disaster-recovery-strategic-issues-and-action-in-australia
4. UNDRR: www.undrr.org
5. UNDRR, Sendai GAP: www.undrr.org/publication/gender-action-plan-support-implementation-sendai-framework-disaster-risk-reduction-2015

Abstract

There is a notable shift in gender and disaster research towards addressing gender and sexual minorities, with a growing body of literature arguing for the need to go 'beyond the binary'. While critiquing the traditional gender dichotomy remains essential, discarding fundamental concepts such as the binary way in which gender is constructed at the societal level, may undermine efforts to address those marginalised by it. The violence and sexual assaults women are often subjected to in the immediate aftermath of disaster, highlights the critical need to expose the entrenched power dynamics that perpetuate inequality and oppression based on gender. The emerging tension between structural and more individualised, agentic perspectives underscores the need for a comprehensive approach that emphasises the structural as well as the personal dimensions of gender and sexuality in the context of disasters. By recognising and addressing these complexities, gender and disaster research can contribute to an inclusive and equitable disaster management and response framework. This paper provides an overview of gender and disaster research conducted over 10 years and presents findings about the experiences of women, men and people with diverse gender and sexual identities in disaster contexts.

Gender and sexual minorities and disaster: balancing structural and agentic perspectives

Peer reviewed

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SUBMITTED
3 April 2024

ACCEPTED
6 May 2024

DOI
www.doi.org/10.47389/39.3.06

Introduction

Since the 1990s, gender has emerged as a notable consideration in disaster research, driven by the acknowledgment that women and men have distinct experiences and needs at all stages of disaster (Enarson and Morrow 1998). Research quickly revealed that, overall, women as a class are more negatively affected by disasters than are men as a class (Enarson and Morrow 1998). For example, women are under-represented and often excluded from emergency and disaster planning, are vulnerable during and after these events to domestic violence and sexual assault and face demands for unpaid work and increased caring responsibilities in preparation, response and recovery (Foote et al. 2023; Parkinson 2019; Rushton et al. 2020; Sety, James and Breckenridge 2014). Research on masculinity and disaster exposes men's privileged status in management and response, with heightened gendered expectations promoting a hyper-masculine ideal, leading to adverse effects like ignoring warnings and avoiding help-seeking, contributing to depression and suicide (Parkinson 2022a, b; Pease 2014; Tyler and Fairbrother 2013a, b; Zara et al. 2016). Since foundational work on gender inequality, there has been an increasing interest in the field around how members of sexual and gender-diverse groups (commonly referred to as lesbian, gay, bisexual, trans, intersex, asexual + 'LGBTIQA+' themselves a diverse and non-homogenous set of individuals) are differently affected by disasters. Studies indicate that gender and sexual minorities encounter various challenges throughout disaster phases, such as, exclusion, gender-based violence, discrimination, harassment and social isolation (Dominey-Howes, Gorman-Murray and McKinnon 2014, 2016, 2018; King 2022, Leonard et al. 2022; Parkinson et al. 2022b).

Gender and sexual minorities in disaster research reveals tensions in theoretical understandings of gender. Scholars drawing on structural perspectives view gender as a harmful social construct and hierarchical system that is fundamentally relational (Tyler and Fairbrother 2013a, b). This means that the expectation for women, collectively, to adhere to societal constructs of femininity, and similarly for men, as a class, to maintain standards of masculinity creates a reciprocal relationship. The dynamic between femininity and masculinity goes beyond explaining differences or acknowledging inequality. It reveals that gender constructs are intricately intertwined and mutually constitutive of each other (Connell 2022; Pease 2014; Tyler and Fairbrother 2013b). Those adopting a structural approach see gender as intertwined with broader social, cultural and institutional structures that shape power dynamics and patterns of inequality. Therefore, they emphasise the centrality of the gender dichotomy in analysis, recognising that individual experiences of gender may not align with this construct (Enarson and Pease 2016).

Conversely, gender and disaster scholars adopting agentic perspectives challenge the adequacy of this dichotomy, contending that traditional gender concepts are limiting and ignore the realities of gender and sexual minorities (Dominey-Howes et al. 2022; Haworth, McKinnon and Eriksen 2022). They advocate for moving beyond binary constructions of gender and to disrupt automatic assumptions about sex and gender categories (Rushton et al. 2019). Agentic perspectives emphasise the role of individual agency and autonomy over structural factors. This does not mean those adopting an agentic perspective disregard power relations completely. Rather, they lean towards the agentic end of the structure/agency continuum (Germov 2013). While both perspectives ultimately envision a future without the binary gender system, the difference lies in their approaches. Agentic perspectives imply that it is possible to transcend the gender binary through individual agency and the ability of individuals to challenge binary gender norms, while structural perspectives assert the need to dismantle the gender binary by addressing systemic barriers and inequalities that perpetuate these norms at a societal level.

This paper provides an overview of gender and disaster research conducted over the past decade, emphasising key findings regarding the experiences of women, men and people with diverse gender and sexual identities in disaster contexts. The paper explores tensions arising from differing theoretical perspectives on gender and the centrality of the man/woman dichotomy in analysis. It argues that despite individual experiences, it remains crucial to understand the complexities of the dominant construction of gender as binary. It concludes by suggesting it is essential to strike a balance between the individual and structural dimensions of gender and sexuality in disaster.

Aim

Although the academic literature on gender and disaster research is expanding internationally, with a notable emerging subfield focusing on gender and sexual minorities (Dominey-Howes et al. 2022), it remains a niche. The aim of this paper is to review the current research in this burgeoning area to identify the scope and nature of the body of literature.

Method

A scoping review was undertaken to map the current landscape of research to shed light on the range and nature of the literature (Paré et al. 2015). A search for sources published in the previous decade (2013–23) was conducted using the centralised database interface at the Monash University library and Google Scholar using the terms: gender and sexual minorities, LGBT(IQA+); gender and disaster. There are a variety of terms and acronyms used to refer to gender and sexual minorities, meaning it is possible key texts were missed in the initial search. To mitigate this, a snowballing approach was employed to identify works cited in relevant contributions (Wohlin et al. 2022). A total of 57 publications were found in the initial search. This was refined to include only those relevant to the aims of the study, leaving 44 publications (full list in the Appendix, p.13).

The inclusion criteria were narrowly focused on literature concerning gender and sexual minorities and disaster with a focus on the Australian literature and context. A key limitation of this study is its narrow scope and the potential to exclude relevant literature with a less explicit focus on gender and sexual minorities. However, the publications included in this scoping review effectively capture much of the existing body of research on gender and sexual minorities in disaster, providing sufficient material to discern broad trends and patterns. This provides a foundation for further investigation (Paré et al. 2015).

Women and disaster

Research indicates that disasters are 'fundamentally social events' (Enarson and Pease 2016:3). Globally, women as a class, face a higher risk of injury and mortality during disasters compared to men as a class, reflecting their lower social position (Enarson and Morrow 1998; Tyler and Fairbrother 2013b). Collectively, women are more vulnerable during all phases of disaster, including exposure to risk and during response and recovery (Parkinson et al. 2018; Tyler and Fairbrother 2013a). For example, women are frequently excluded from emergency services agencies responsible for disaster preparedness, planning and response, which contributes to their heightened vulnerability during crises (Parkinson, Duncan and Archer 2019). Disasters also result in new or increased domestic

violence against women and their children (Enarson, Fothergill and Peek 2018; Parkinson 2019; Parkinson, Lancaster and Stewart 2011; Parkinson and Zara 2013; Sety, James and Breckenridge 2014), alongside heightened demands for women's unpaid (and often undervalued) work and caregiving responsibilities (Rushton et al. 2020). After a disaster, the rise in informal caregiving roles and the scarcity of available jobs disproportionately hinder women's re-entry into the workforce compared to that experienced by men (Spencer et al. 2018).

Violence and sexual assault are particular concerns for women and girls in the aftermath, recovery and rebuilding after disaster. For example, following the Northern Rivers floods in 2022 in the north-eastern region of New South Wales, which affected 18 small towns and settlements as well as a major urban centre, women reported experiencing sexual assaults and violence in emergency shelters (Foote et al. 2023). This occurred because men exploited the lack of proper triage and separation at evacuation centres and this had 'long lasting impacts' on women's wellbeing (Foote et al. 2023:26). Overall, women as a class are more negatively affected during disasters than men because disasters occur within existing societal power relations that disadvantage women and privilege men (Enarson and Morrow 1998; Fairbrother and Tyler 2019; Parkinson et al. 2022a; Pease 2014).

Crucially, gender and disaster research establishes that women experience disadvantage because of their 'social and economic positions in society' rather than being explained by any essential biological or inherent difference between men and women (Tyler and Fairbrother 2013b:21). Socio-political factors including gender inequality contribute major limitations to women's access to resources, knowledge, networks, public life and decision-making power (Fairbrother and Tyler 2019; Rushton et al. 2020). Disaster foregrounds the often-lethal results of women's social position. For example, the Indian Ocean Tsunami in 2004 disproportionately affected women who were 80% of the total deaths in parts of India, Indonesia and Sri Lanka (Ariyabandu 2009; Rushton et al. 2020; Tyler and Fairbrother 2013b). While there were attempts to naturalise the deaths of women, scholars taking a structural perspective have pointed out the social dimensions. These include gendered expectations regarding restrictive female clothing and limited opportunities for women to learn how to swim; both of which stem from social conditions that reduced women's chances of surviving flooding (Ariyabandu 2009; Tyler and Fairbrother 2013b).

This research highlights that disaster exacerbates existing marginalisation of women, stemming from their unequal position in society, rather than being the root cause (Enarson and Pease 2016; Fairbrother and Tyler 2019; Parkinson 2022a). Existing research acknowledges intersecting inequalities, recognising that not all women are equally affected. For example, racially marginalised and economically disadvantaged women often experience heightened vulnerability in disaster contexts for various reasons (Enarson, Fothergill and Peek 2018; Tyler and Fairbrother 2013b).

Men and disaster

Gendered societal norms and expectations, which influence all aspects of women's experiences during disasters, also affect men, albeit in different ways (Parkinson and Zara 2016; Pease 2014; Tyler and Fairbrother 2013a, b). This is because gender is relational, where women as a class are expected to conform to constructions of femininity and men as a class uphold standards of masculinity (Connell 2022; Pease 2014; Tyler and Fairbrother 2013b). In the context of disaster, gendered expectations typically ascribe 'men to protect and provide and women to sacrifice and nurture' (Parkinson 2020:12). While gender has negative effects for both men and women in disaster, it is important to recognise that gendered effects are not experienced equally. From a structural perspective, gender operates as hierarchical power where men as a class hold dominance over women as a class. This means that - as in society more broadly - men's experiences and perspectives are privileged in emergency management and response where an 'over-representation of men in senior decision-making roles results in economic, social and organisational interventions that retain existing structures and reinforce existing gender inequalities' (O'Malley et al. 2022:45). However, as scholars have uncovered, there are important complexities in gendered power relations that mean men are not only privileged over women, but certain types of masculinity are valued over others.

A useful concept used in the field of gender and disaster research on men is 'hegemonic masculinity' (Connell 2000). The concept has been used to identify a diversity of masculinities that are 'marked by hierarchy and exclusion' (Pease 2014:64). In situations of disaster, the hyper-masculine ideal is valorised, which means that the 'manliness of men and boys is judged by their ability' to meet the expectation that men are 'heterosexual, aggressive, authoritative and courageous' (Pease 2014:64). In Australia, for example, Parkinson et al. (2022) state that men are less likely than women to hear danger warnings, perceive risk and feel concerned about potentially life-threatening situations. In relation to bushfires in Australia, Tyler and Fairbrother (2013a) state that men are more likely to 'stay and defend' their property. As a result - and an exception - men have been historically more likely to die in bushfires. In the aftermath of disasters, men are less likely to seek crisis support due societal norms surrounding masculinity (Parkinson, Duncan and Archer 2019; Parkinson

2022a, 2022b; Pease 2012). This can have devastating effects and contributes to depression and suicide for some men (Zara et al. 2016). Considering nuanced intersections between masculinities and LGBTIQA+ identities reveals a spectrum of vulnerabilities that adds further complexity to the discussion (Gorman-Murray, McKinnon and Dominey-Howes 2016). Critical research on men, masculinity and disasters has contributed much to the field. Importantly, this area of research highlights the need for a gender-sensitive approach that goes beyond understanding how men and women as distinct groups are differently vulnerable to examining how gender as a social construct impacts people at all stages of emergencies and disasters.

Gender and sexual minorities and disaster

Another way in which the gender and disaster literature has expanded is through investigating how disaster effects vary for members of LGBTIQA+ communities, considering different dimensions of gender and sexual marginality. Although still emerging, 'this area of research is receiving increasing attention and is rapidly expanding' (Dominey-Howes et al. 2022:261). The extant scholarship has made important contributions to understanding the particular vulnerabilities, and resilience of LGBTIQA+ people (Gorman-Murray, McKinnon and Dominey-Howes 2016; Spencer et al. 2018). It is acknowledged that there are significant differences and varying 'levels of marginality and privilege' within and between LGBTIQA+ populations (Haworth, McKinnon and Eriksen 2022:10). However, research has found that existing discrimination against this population is exacerbated in times of disaster (King 2022; Leonard et al. 2022; O'Malley et al. 2022).

Established heteronormative and patriarchal societal assumptions and standards are recognised as major factors influencing LGBTIQA+ people's experiences of disaster and access to services (Gaillard, Gorman-Murray and Fordham 2017; Gaillard et al. 2017; Gorman-Murray et al. 2016; Leonard et al. 2022). For example, vulnerability may be increased at emergency relief shelters where there is a lack of private or 'safe space', the family unit is on display and there is fear of disclosing gender or sexual identity (Dominey-Howes et al. 2022; Gaillard et al. 2017). This is especially heightened in rural contexts where conservative social norms may be prevalent (Pease 2014), or when faith-based organisations are involved in service delivery (Dominey-Howes, Gorman-Murray and McKinnon 2016; Gaillard, Gorman-Murray and Fordham 2017; King 2022). Indeed, LGBTIQA+ people have been blamed in public discourse globally for causing disaster events because they have 'sinned' therefore inducing 'God's wrath' (Rushton and Scarlett 2023:353). Further, there is an absence of LGBTIQA+ experiences of disaster reported in the Australian media (McKinnon, Gorman-Murray and Dominey-Howes 2017) and exclusion of gender and sexual minorities from emergency management response and recovery plans (Dominey-Howes, Gorman-Murray and McKinnon 2016; Parkinson et al. 2022b) as well as a lack of understanding of LGBTIQA+ people's specific needs among emergency services personnel (Leonard et al. 2022; Parkinson et al. 2022b). These factors contribute to further marginalisation, discrimination, harassment, violence, abuse and social isolation during and after emergencies (Dominey-Howes et al. 2022; Gaillard, Gorman-Murray and Fordham 2017; Leonard et al. 2022; O'Malley et al. 2022; Parkinson et al. 2022b).

As noted, the LGBTIQA+ population is not a homogenous group and different identities experience different types of marginalisation in different contexts (Gorman-Murray, McKinnon and Dominey-Howes 2016; Haworth, McKinnon and Eriksen 2022). For example, lesbian and bisexual women experience two types of 'mutually reinforcing' discrimination occurring at the intersection of sexuality as well as sexism and misogyny (Parkinson et al. 2022b:77). A rare study on lesbians and bisexual women's experiences of disaster in Australia showed lesbians and bisexual women faced sexist and homophobic discrimination and abuse 'both as recipients of services and as paid or volunteer staff' (Parkinson et al. 2022b:78). For trans and gender-diverse people, the registration process at emergency relief centres has been acknowledged as a point of potential exclusion because gender and sexual minorities may not fit the male or female tick box (Gaillard et al. 2017; Dominey-Howes et al. 2022). Additionally, toilets and amenities that are sex segregated may not be suitable for trans and gender-diverse people (Dominey-Howes et al. 2022; Nicholson 2022). This area of research highlights important considerations at both the policy and practical levels.

Emerging tensions

When taken as a whole, the extant gender and disaster literature reveals differing theoretical understandings of gender as a concept that results in tensions between interpretations of problems and solutions. This paper contends that the main tension rests on understandings of gender and the centrality of the men/women dichotomy in analysis. Gender and disaster scholars drawing on structural perspectives understand gender as 'above all, relational. It is a social structure and a major pattern in human social life' (Connell 2022:6). These scholars articulate a structural conception of gender where 'gender is understood as a form of social structure within which *persons of all genders* are embedded' (Enearson and Pease 2016:6, emphasis added). This means that gender is not 'simply a biological dichotomy between male and female; or (…) an individual and very personal identity' but rather, a broader social pattern (Connell 2022:6). Crucially, scholars from this perspective take the dominant construction

of gender as binary as central to analysis, despite acknowledging that individual experiences of gender may not align with this dichotomy (Enarson and Pease 2016; Fairbrother and Tyler 2019; Pease 2014; Parkinson 2022a, b; Tyler and Fairbrother 2013a, b).

In contrast, gender and disaster scholars drawing on more agentic perspectives have argued that 'the male/female dichotomy is an insufficient construct with which to address the gendered dimensions of disaster' (Haworth, McKinnon and Eriksen 2022:2). The very existence of gender and sexual minorities has prompted scholars to assert that the 'traditional concept of gender is limiting' (Larkin 2019:61). Scholars drawing on agentic perspectives have argued that binary gendered conceptions and language erases and 'excludes the lived experiences of gender and sexual minorities' (Haworth, McKinnon and Eriksen 2022:2). It follows that dichotomous gender constructions, not only in policy and practice but also in conceptual analysis, then cause 'further marginalisation of groups that are already marginalised' (Dominey-Howes et al. 2022:260). The proposed solution is to 'move 'beyond the binary' and (...) disrupt automatic assumptions that (sex and gender) are omnirelevant categories' (Rushton et al. 2019:10). In this way, agentic interpretations of gender challenge structural understandings of gender as a powerful social construct imposed on individuals informing all aspects of life.

Agentic perspectives provide important contributions to the field by uncovering the diverse experiences and needs of gender and sexual minorities. However, the tendency to focus on the individual risks underplaying the structural dimensions of gender and sexuality, potentially limits the ability to address broader systemic inequalities and power dynamics in the context of disasters. As Enarson and Pease (2016) point out, gender is too often simplistically understood as 'an identity or an attribute of individuals rather than a set of practices involved in the reproduction of institutions and an attribute of social structures' (p.5). Suggestions to go 'beyond the binary' and abandon the centrality of gender as socially constructed and dichotomous risks obscuring the role of 'powerful gender hierarchies' in disaster (Enarson and Pease 2016:11). Certainly, the prevailing gender dichotomy plays a defining role in categorising those living or identifying outside of the binary system as a minority. However, even individuals who do not conform to binary gender remain defined in relation to the established gender dichotomy. To begin to unpick the various consequences of the gender dichotomy, including the experiences of gender and sexual minorities, it must continue to be the centre of analysis.

Balancing these tensions is especially important in emergency and disaster management where the gender dichotomy is particularly pronounced and emphasises the pragmatic challenges of transcending the binary framework. A practical example of where tensions have surfaced in the pursuit of gender inclusivity is in the provision of public amenities, including in evacuation centres (Kalms and McVey 2024; Nicholson 2023). Efforts towards inclusivity have led to a shift from female/male to 'all gender', 'gender-neutral', or 'unisex' facilities (Kalms and McVey 2024). However, this shift eliminates spaces exclusively for women and leaves them vulnerable to potential male violence. This exposes the premature and potentially harmful outcomes of moving beyond binary gender conceptions before adequately addressing the gender binary and women's unequal status. While some recognise amenities in evacuation centres should be separated for 'people with disabilities, "Male", "Female" and "All Genders"' (Nicholson 2022:28), 'all gender' spaces are increasingly favoured over segregated ones (Kalms and McVey 2024). This demonstrates the practical limitations of applying an agentic approach and reinforces that this perspective should be regarded 'in addition to, not instead of' structural approaches to ensure practical benefits for all genders (Blanchard et al. 2023:5).

Conclusion

Gender and disaster research consistently demonstrates that, globally, women experience disproportionate vulnerability to the effects of disasters, spanning exposure, preparedness, response and recovery. Gendered societal norms also affect men in various ways. Specific masculine ideals enforced during disasters impose unrealistic expectations on men that can lead to harmful outcomes. Additionally, research on gender and sexual minorities in disasters reveals the distinct vulnerabilities and resilience of LGBTIQA+ individuals. The literature reveals a tension arising from differing interpretations of gender and the significance of the men/women dichotomy in analysis. Agentic perspectives argue that the traditional gender binary falls short in regard to the diverse effects of disasters across genders, thereby neglecting the experiences of gender and sexual minorities and exacerbating their marginalisation. Structural perspectives understand gender as a social pattern rather than merely a biological binary or individual identity, with scholars highlighting its central role in analysis despite recognising variations in individual gender experiences.

The expanding literature on gender and sexual minorities provides valuable insights into those experiences and shows the importance of including this population in gender and disaster research. However, it is important to understand and recognise the dominant construction of gender as dichotomous and that femininity is constructed to fit masculinity, even if this does not reflect each individual's personal experience. To understand the gender dichotomy and its consequences, including the experiences of gender and sexual minorities, it must remain the

focal point of analysis. The tension between structural and agentic perspectives underscores the need for a comprehensive approach that considers the individual and the structural dimensions of gender and sexuality in the context of disasters. By recognising and addressing these complexities, gender and disaster research can contribute to a more inclusive and equitable disaster management and response framework.

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Dr Tegan Larin is a Research Fellow located within Monash University's XYX Lab. Drawing on social and political theory, policy and feminist theory her research demonstrates a commitment to ending violence against women.

Appendix

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Abstract

The circumstances faced during emergency incidents are characteristically physical, situational or time-critical, but little is known about how people manage their periods in these extreme settings. This study examined the attitudes, experiences and practices of managing menstruation by emergency services personnel in Australia while deployed operationally. Using a mixed-methods approach, a survey (n=287) collected data about operational roles, period characteristics, period management during operations and period stigmatisation. The findings show that navigating and solving the intersections between periods and the demanding circumstances of deployment is given substantial consideration by people who menstruate. Participants actively found solutions to the various routines, etiquettes and discomforts of menstruation to maintain service to their operational roles, despite problematic influences of period character and menstrual symptoms, menstrual products, hygiene, toileting, privacy and stigmatisation. Such self-determination suggests identity formation as competent first responders who also menstruate. However, externalities of menstruation that could be better accommodated in operational settings include toileting, bodily hygiene, field privacy, menstrual product supplies, used product disposal or cleaning, support, education and training. Attention to menstrual health in workplaces is increasing and should become a normalised aspect of emergency services.

Managing menstruation while deployed operationally: experiences from the Australian emergency management sector

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SUBMITTED
3 July 2023

ACCEPTED
1 March 2024

DOI
www.doi.org/10.47389/39.3.16

Introduction

Menstruation is a regular occurrence in the lives of girls, women and people who menstruate. Part of a monthly cycle, menstruation is the shedding of the functional layer of the endometrium (the mucus membrane lining the uterus). The functional layer prepares the uterus for implantation by a blastocyst (cluster of dividing cells made by a fertilised egg) and shedding of the functional layer indicates that conception has not occurred (Norwitz et al. 2007). The endometrial (menstrual) cycle consists of 3 phases, controlled by sex steroids (hormones). The proliferative phase (from day 1 to 14 of a 28-day cycle) grows the endometrium. The secretory phase starts at ovulation and prepares the endometrium for implantation by increasing its vascular supply and stimulating mucous secretions (Dhanalakshmi et al. n.d.). Gradual withdrawal of sex steroids causes shrinking and breakdown of the endometrium, leading to the onset of the menstrual phase where the functional layer of the endometrium (consisting of blood and endometrial tissue) sheds and is expelled out of the body through the vagina. This is called menses (also known as a period) and forms day 0–5 of the next endometrial cycle (Dhanalakshmi et al. n.d.). On average, 80 ml of blood is expelled during menses, with about 50% expelled during the first 24 hours of a 3–5 day menstrual phase (Dhanalakshmi et al. n.d.). While the physiology of menstruation is largely known, the construction of social meanings of menstruation are less resolved and vary among cultures, genders and individuals.

Menstruation occurs approximately 300–400 times throughout a lifetime (Norwitz et al. 2007). On any given day, 800 million people worldwide are menstruating (WaterAid 2017). Thus, it is inevitable that the experiences of menstruation will intersect with employment. Management of menstrual hygiene in the workplace is supported by access to water and sanitation facilities, adherence to labour laws (e.g. breaks and leave provisions) and workplace practices (e.g. supervisory permissions, uniforms) (Lahiri-Dutt and Robinson 2008; Sommer et al. 2016; Fry et al. 2022). Barriers to menstrual hygiene in the workplace can arise from lack of sanitation facilities, informal and overcrowded workspaces, stigmatisation of menstruation, being unable to voice rights to water and sanitation and the affordability and availability of menstrual products (Sommer et al. 2016). One of the 5 pillars of menstrual health is the freedom to participate in all civil, cultural, economic and political spheres of life - including employment - free from menstrual-related exclusion, restriction, discrimination or coercion (Hennegan et al. 2021). Thus, it is imperative that workplaces understand, acknowledge and embed practices that support the menstrual health of employees.

Some occupations place employees in situations that generate challenging surroundings in which to manage menstruation. The characteristics of these surroundings may include thermal extremes, remoteness, danger, situational criticality and longevity, required use of protective equipment, lack of privacy, safety regulations, distance from sanitation facilities and insensitive management cultures. For example, female Antarctic fieldworkers described creative ways to manage menstrual health during remote expeditions, camping in low temperatures with required protective equipment, a lack of privacy and being in male-dominated teams (Nash 2023). Female military police described instances where situational criticality or duty regulations inhibited attendance to menstrual hygiene (Phillips and Wilson 2021). Deployed female soldiers reported issues of staying clean, soiling uniforms and interrupting team efforts to attend to menstrual hygiene (Chua 2022). Emergency room doctors reported that busy shifts (situational longevity) delayed the opportunity to take toilet breaks and that lockers with their personal belongings could be some distance away in the hospital (Rimmer 2021). Challenging surroundings are also common to the emergency and disaster management sector. Bushfire (and hazard reduction) grounds, floodscapes, cyclone paths, accident sites, building fires, search and rescue sites, command posts, incident control rooms and evacuation centres may exhibit one or more of the characteristics of challenging surroundings. However, little is known about the management of menstruation by personnel deployed operationally in emergency and disaster settings.

The aim of this study is to examine the attitudes, experiences and practices of managing menstruation by emergency service personnel in Australia while deployed operationally. It seeks to understand how aspects of menstruation are managed in challenging settings and the factors that influence the adoption of menstrual management strategies.

Methods

This exploratory study used a pragmatic, mixed-methods approach (Tashakkori and Teddlie 2008) to interpret the experiences and practices of menstruation management while deployed operationally. Close-ended quantitative and open-ended qualitative data were collected using a questionnaire (Appendix 1, online material). Quantitative items captured the distributional occurrence of aspects of menstruation management during deployment. Qualitative items expanded on some of the quantitative items (Appendix 1, online material) allowing participants to explain practices and experiences in detail. A parallel mixed data analysis (Teddlie and Tashakkori 2009) was applied. Quantitative data are reported as frequency distributions and qualitative responses were analysed thematically to narrate and give experiential insight to the quantitative data.

Recruitment

Study participants were recruited to undertake a survey between December 2022 and June 2023 that was presented online as a questionnaire in the Qualtrics platform. A purposive sampling strategy (Teddlie and Tashakkori 2009) was applied. Conditions for consent required that the participant was over 18, was a staff or a volunteer of an emergency services agency in a role that requires deployment operationally and a person who menstruates, or has done so in the past. People not currently menstruating (e.g. they were pregnant, breastfeeding or menopausal) were invited to contribute and answered by thinking about their experiences when they were menstruating. Participants self-selected into the study. An invitation to participate (including the link to the survey) was advertised through the newsletters, internal communications and social media of Australian emergency management agencies, networks and representative bodies. Agencies from every state and territory were approached with a request to advertise, but the researcher is unsure of the final status of every request. The study was limited to the emergency services sector; those agencies predominantly involved in responding to natural hazard events. Personnel from ambulance, police and defence were not approached.

The study was conducted under the University of New England Human Research Ethics Committee approval HE22-193.

Questionnaire

Participants completed a questionnaire (Appendix 1, online material) across 5 topics:

1. Demographics and operational duties – contextual information on the participant and the nature of their operational role in emergency management.
2. Period characteristics – data on participants' menstrual cycles, menstrual symptoms and use of menstrual products.
3. Period management while deployed operationally – data on strategies and experiences of managing menstruation while deployed operationally including planning, situational factors, managing menstrual symptoms, use of menstrual products and menstrual suppression.
4. Period stigmatisation in operational settings – data on experiences of period stigmatisation while deployed operationally including assumptive comments about menstrual status, conduct of duties and impacts of stigmatisation.
5. Supplementary views on menstruation and deployment – data contributed by participants when asked if there was anything they would like to add about their experiences of, or views about, menstruation and deployment that was not covered in Topics 1–4 above.

Quantitative items were answered using Likert-scales with a 'Prefer not to say' option. Qualitative items were optional and answered using open-ended written responses with no word limit.

The design of the questionnaire and the language of the items was constructed by the researcher to suit the Australian vernacular and to understand menstruation experiences in relation to operational roles within the Australian emergency management sector. However, the topics and items in the questionnaire were informed by various literatures. The medical literature (e.g. Dhanalakshmi et al. n.d.; Schoep et al. 2019a and 2019b) informed items about the temporal character of the menstrual cycle, the prevalence of menstrual symptoms and associations with gynaecological conditions such as endometriosis, and the impacts of menstrual symptoms on performance. Menstrual suppression (stopping periods through the use of hormonal contraceptives) is frequently adopted by US military personnel for military readiness (Phillips and Wilson 2021; Chua 2022) but the practice is debated medically (see Grant 2000; McGurgan et al. 2000; Thomas and Ellerston 2000). Several items about the use of, and attitudes towards, menstrual suppression were included in the questionnaire because of potential 'readiness' parallels with the emergency management sector. Socio-cultural research on menstrual experiences in workplaces (e.g. Smith 2008; Sommer et al. 2016; Barnack-Tavlaris et al. 2019; Phillips and Wilson 2021; Sang et al. 2021; Nash 2023) was used to inform items exploring the strategies used to manage menstruation and the situational factors that may influence menstrual hygiene. Critical menstruation studies is a vast literature critiquing menstruation through lenses of feminism, international development, education, human rights, labour practices, culture and psychology, among others (e.g. Bobel et al. 2020). Two areas of knowledge were considered relevant to menstruation in the emergency services operational setting: period stigmatisation and privacy (e.g. Brooks-Gunn and Ruble 1980; Roberts et al. 2002; Sang et al. 2021). Several items were crafted to understand prevalence of menstrual stigmatisation and preferences for menstruation to be revealed or concealed.

Data analysis

The study is exploratory, rather than explanatory. In the exploratory approach, the results from each topic are analysed separately and not integrated to examine causal statistical relationships between factors. Quantitative items are reported using descriptive statistics. Qualitative items were either summarised into a list of activity occurrences, or inductive thematic analysis used to identify emergent themes. The author coded text by reading for recurrent words/phrases, circumstances or experiences and iteratively condensed these into emergent themes. Each qualitative item was analysed separately.

The dataset of quantitative statistics and selected qualitative responses is available at Appendix 2 (online material).

Results

Sample description

The final sample contained 287 useable responses consisting of 261 complete responses and 26 incomplete responses. Incomplete responses were included where the participant answered one or more of the period management or stigma items. A total of 384 survey interests were registered but 97 were excluded because they were incomplete and unusable (50), did not give consent (36), were from males who did not menstruate (7) or were unreliable because of straight-lining (4). The seven male responses provided only qualitative answers about managing menstruation in operational settings. These were deemed cognate with the aim of the study but were analysed and interpreted independently.

People have a range of gender identities and menstruate (including girls, women, non-binary, boys, men, transgender). In this study, participants identified as female (97.9%) and non-binary (2.1%). No menstruating participants identified as male, intersex, trans or other

(Appendix 2, online material). Thus, the term 'women and non-binary participants' was used when reporting or interpreting data (APA 2020). Participant use of the binary terms women/men or female/male is retained in quotes, as are the terms used in cited literature. The gender-neutral term 'person' was used in the questionnaire (Appendix 1, online material), although it was necessary in some items to use the binary women/men and female/male to imply generalised (but imperfect) distinction between women as menstruators and men as non-menstruators. The term men/male is used when referring to the 7 male-identified non-menstruators who contributed to the survey and in the discussion to imply a generalised binary of women as menstruators and men as non-menstruators.

Topic 1: Demographics and operational duties

The age of participants ranged from 17 to 70 years (mean=40 years). Length of service in the emergency management sector ranged from less than 1 year to 50 years (mean=13 years). Participants were associated with a range of emergency services organisations. Most responses were from rural or country fire services (Table 1). Thus, there is bias in the results towards experiences of managing menstruation in firefighting settings. Participants were staff or volunteers (or both) and most had been deployed operationally more than 10 times (Table 1).

The operational duties and roles described by participants included firefighting (bushfire, hazard reduction, structural fire), aviation search and rescue, road accident rescue, storm and flood assistance, flood rescue, vertical rescue, remote-area firefighting, HAZMAT incident response, strike team deployment, basecamp deployment, incident management roles, control centre roles, state operations centre roles, station officers, disaster recovery, evacuation centre roles, biosecurity response, pandemic response, land-based search and rescue, surf lifesaving, catering, logistics, peer support, public information provision, community liaison and engagement, incident management, radio and communications operations, first aid, airbase management, air observation, driver, brigade leader, crew leader, senior leader, animal welfare and rescue, training officer and patrolling. Most participants reported responsibilities in more than one duty or role. The range of duties and roles undertaken by participants highlights the potential for the characteristics of challenging surroundings such as situational criticality and longevity, remoteness and environmental extremes to be generated. One participant wrote:

Table 1: Organisation, role, deployment experience and menstrual status of survey participants.

Characteristic	Items	*n*	%
Organisation	Land management agency (including forestry)	20	7.0
	Local government	1	0.3
	Metropolitan fire service	6	2.1
	Non-government organisation	1	0.3
	Rescue agency	1	0.3
	Rural/country fire service	221	77.0
	State emergency service	15	5.2
	State government	22	7.7
	Prefer not to say	0	0.0
Role	Staff	70	24.4
	Volunteer	193	67.2
	Staff and volunteer	24	8.4
	Prefer not to say	0	0.0
Number of deployments	Less than 5	47	16.4
	5 to 10	53	18.5
	Greater than 10	186	64.8
	Prefer not to say	1	0.3
Menstrual status	Menstruating	194	67.6
	Suppressing menstruation using hormonal contraceptives	28	9.8
	Peri-menopausal (the transition to menopause)	24	8.4
	Menopausal or post-menopausal	33	11.5
	Not menstruating (pregnant or breastfeeding)	5	1.7
	Other*	3	1.0
	Prefer not to say	0	0.0

*The 'Other' responses all indicated status as post-hysterectomy.

I am regularly deployed with as little as 2hrs notice to anywhere in the state to any kind of event that requires people. At any point I am fighting bushfires, conducting flood and storm response, rescue, conducting hazard reduction burns, in (an) incident management or control centre team or working in an evacuation centre. I spend my normal working day out in the bush with no bathroom access.
(Participant 71)

Topic 2: Period characteristics

There is not a 'typical' menstruator within the emergency services sector. Descriptions of participants' periods highlight individual variability in the character of periods, preferences for menstrual products and experience of menstrual conditions and symptoms. Most participants (67.6%) were menstrual, while others were suppressing menstruation, menopausal or not menstruating because of pregnancy, breastfeeding or hysterectomy (Table 1). Regular intervals between periods were experienced by 76% of participants, while 23% of participants experienced irregular intervals between periods. Participant periods ranged from 3 to 11 days of bleeding (mean=5.5 days) with 80% of participants reporting that the number of days bleeding frequently or sometimes varied, ranging from 0 to 30 days of bleeding from period to period. As part of day-to-day life and sense of self, the majority of participants (96.5%) found their periods highly or somewhat annoying.

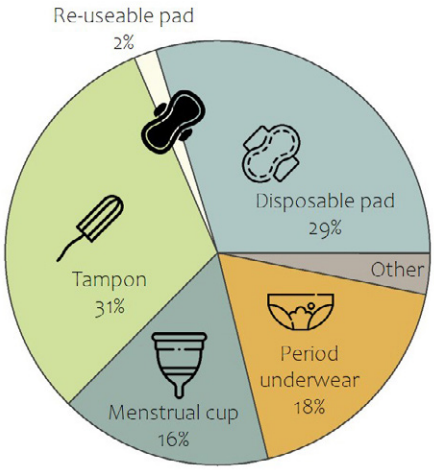

Figure 1: Preferred menstrual product use by survey participants.

Disposable pads and tampons were the preferred menstrual products for 60% of participants, with the remaining 35% of participants preferring to use menstrual cups, period underwear or re-useable pads (Figure 1). However, participants indicated that they frequently or sometimes used more than one product during their period.

Most participants (60%) reported that they had not been medically diagnosed with any menstrual or gynaecological conditions. The remaining respondents commonly experienced endometriosis, menorrhagia (heavy periods) and dysmenorrhoea (menstrual cramps). Many participants reported the co-occurrence of more than one menstrual or gynaecological condition.

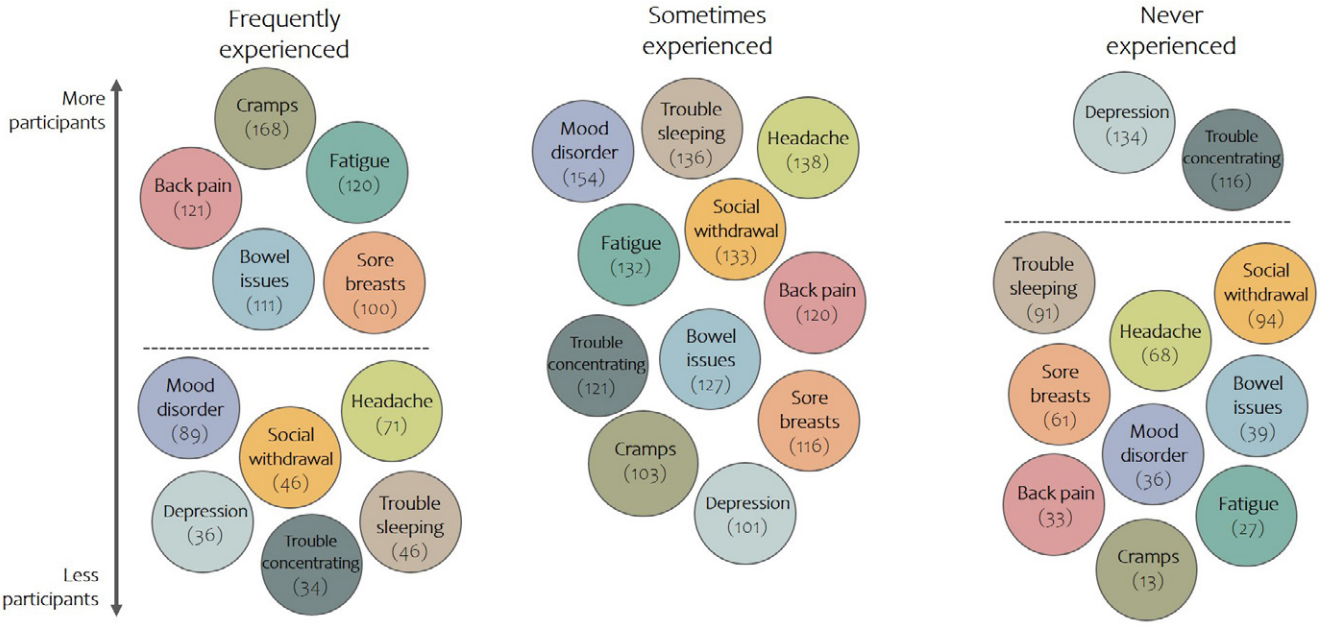

Figure 2: Menstrual symptoms reported as frequently experienced, sometimes experienced and never experienced by survey participants. Numbers in brackets are the number of participants reporting a certain frequency of experience of a menstrual symptom, with higher numbers towards the top of the diagram and lower numbers towards the bottom. The dashed line indicates a distinction in the numbers of participants experiencing menstrual symptoms.

At least one menstrual symptom was experienced by almost all participants (99.7%). Cramps, back pain, fatigue, bowel issues and sore breasts were menstrual symptoms frequently experienced by many participants, whereas depression and trouble concentrating were menstrual symptoms never experienced by many participants (Figure 2). A relatively constant number of participants reported that they sometimes experienced menstrual symptoms (Figure 2). These 'sometimes' responses encompassed all menstrual symptoms (Figure 2), highlighting how the occurrence and type of menstrual symptoms may vary from period to period.

Topic 3: Period management while deployed operationally

A range of experiences and strategies were evoked to manage menstruation while deployed operationally, highlighting that the management of menstruation is not passive. Attention is actively paid to the interaction of tasks, teams, performance and menstruation in relation to deployment.

Overall, 77% of participants found it 'somewhat difficult' or 'extremely difficult' to manage their period while deployed operationally, while 23% found managing their period 'somewhat easy' or 'extremely easy'. Factors arising in the deployment environment such as personal hygiene, disposing and washing of used menstrual products and the changing of menstrual products were the characteristics of periods most often thought about in planning for and during operational duties (Figure 3). For others, characteristics arising from the period such as menstrual symptoms, cramps and fatigue, heavy flow and irregularity were front-of-mind (Figure 3). Most participants learnt about managing periods during deployments by figuring it out through trial and error (Figure 4). A few others talked to female colleagues or family or friends, but learning about managing periods during deployment is rarely covered in training or discussed with male or female supervisors (Figure 4).

Availability of toilet facilities was considered a key situational factor influencing the management of periods while deployed operationally. Related factors included inadequate disposal or washing facilities for menstrual products, lack of privacy and unhygienic conditions (Figure 5). For others, situational factors such as time availability during busy operations, assumptions of male toileting needs, lack of planning for breaks and uniform or protective clothing influenced how well participants were able to manage their period while deployed operationally (Figure 5).

Thematic analysis of participant responses describing menstrual management during operations revealed active strategies of product choice (absorbency, avoiding leakage, ease of use, disposal and cleaning), toileting (time criticality, changing and disposing of used products, cleaning re-useable products, creating privacy within the limitations of field locations, hygiene) and preparation (planning, purchasing and carrying products, items for disposal of used products, supplies for symptom management, suppression) (Table 2). Locus of control was core to many practices, conveying a sense that participants recognised the intrinsic nature of menstrual management but paid routine attention to how to best adopt menstrual management practices suited to the circumstances of deployment. Reported practices and experiences of product choice, toileting and preparation show how attention is paid to menstrual management during deployment:

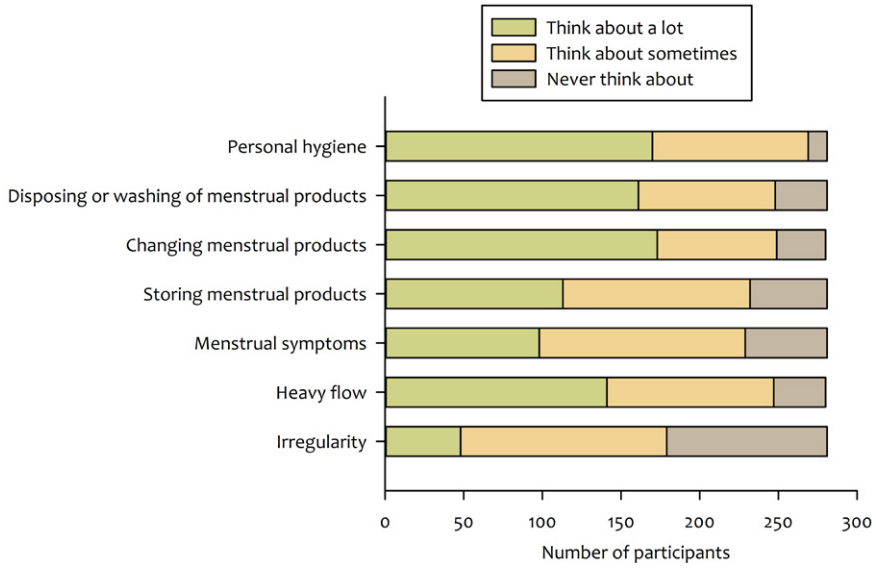

Figure 3: Characteristics of periods considered in planning for and during operational duties.

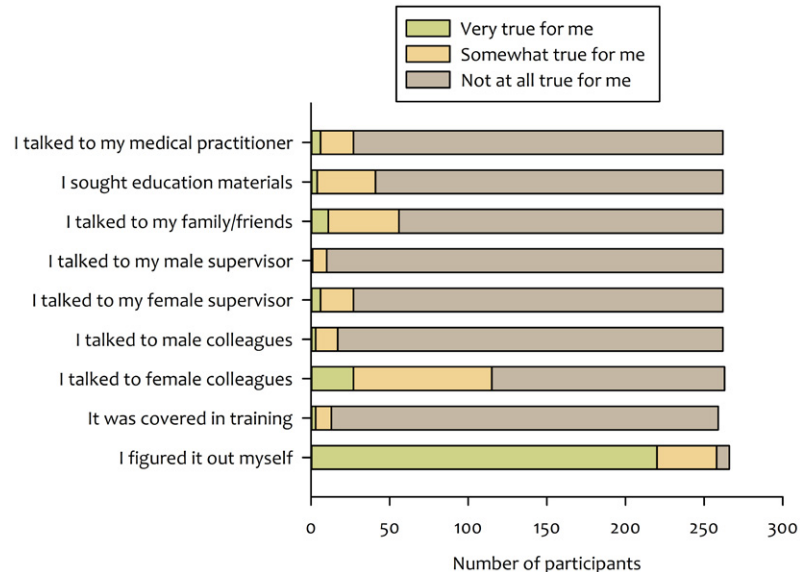

Figure 4: Sources of information for learning about or getting advice on managing periods while deployed operationally.

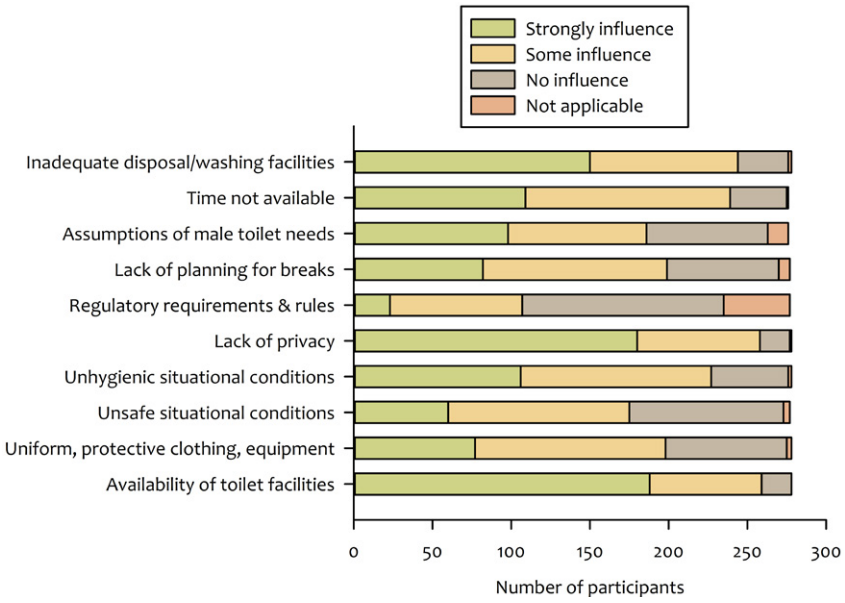

Figure 5: Situational factors influencing the management of periods while operationally deployed.

Using a menstrual cup has been the easiest as there is no need to dispose of it. If all else fails you can leave it in for long periods of time without the concern of Toxic Shock Syndrome, and it holds a good amount of blood. Additionally, if there isn't anywhere to wash it or use toilet paper to clean it up it is not the end of the world to tip out the contents and re-insert it.
(Product choice, P56)

I am a crew leader often of all males…During bush firefighter operations when things aren't as hectic I will announce to the team that I'm off to find a tree for cover to squeeze a lemon (I like making jokes about it because then the guys open up and make jokes about themselves taking a slash and shaking hands with a snake), it opens the conversation up to become easier to talk about and for safety reasons everyone then knows where or when someone has gone to the toilet. In the forest, out of sight, I will kick a hole in the dirt or sometimes dig a bit with my hands or sometimes find a large rock to hide my sanitary products under. It's difficult with timing when there is aircraft on the fireline, they're hard to hide from.
(Toileting – privacy, P209)

If I am in a building that has suitable sanitary disposal units it's not so bad. However, it is sometimes so busy that

you can't leave to go to the toilet as often as you need to and that can lead to leakage and general discomfort.
(Toileting – time criticality, P211)

Due to the uncertainty of operations sometimes (e.g. not knowing accessibility of toilet and waste facilities or break times) means I have taken to carry a "kit" of sorts in my turn out bag with various menstrual products, zip lock bags (for disposal), wipes etc. so I always have some on hand when needed for myself and other firefighters who may need it.
(Preparation, P36)

The Standard Operating Procedures for a brigade is to be fully self-sufficient for 12 hours before relief or assistance might arrive - by default for general hygiene outside of normal toileting I make sure I have my worst case flow and pain covered for double that - no operation I have attended has made any specific effort to providing any personal feminine hygiene coverage.
(Preparation, P166)

Strategies used to manage menstruation included avoidance of deployment because of intractable issues such as situational longevity, period characteristics, lack of facilities or fear of leakage or discovery (Table 2). Unease arising from the theatre of finding toileting privacy privately, forced littering, carrying used products in pockets and backpacks, taking health risks and awareness of field safety compliance can accompany menstruation management during deployment (Table 2). Some participants described avoidant or uncomfortable experiences related to deployment:

As a volunteer firefighter I often have to plan my volunteering around my period. This leaves me at a disadvantage when trying to gain field experience and maintain parity with male field officers.
(Avoiding deployment, P68)

…For volunteer roles I will decline a request for assistance on heavy days of my period as I can't guarantee in the middle of a land search or on a roof with the (organisation) I will need to stop, find facilities, remove overalls, disrupt operations etc. especially if I am the team leader.
(Avoiding deployment, P249)

…Keeping the tampon in – acknowledging the increased risk of TSS – is preferable to the mortifying risk of being unable to manage with only a pad and underwear and bleeding through.
(Health risk, P110)

…To change a tampon if there wasn't enough tree cover or privacy I would ask fellow crew mates to stand watch at the work bay doors of the truck and change the tampon there, and then bury the tampon or wrap in a plastic bag until I could dispose of it on return to station or staging area. That could be very embarrassing but we were all adults and also as an older woman it wasn't so bad. My daughter found it extremely embarrassing but does the same thing.
(Privacy, P149)

Honestly? I reckon there'd be as many used tampons on the fire ground as there are empty water bottles. There's nowhere else to dispose of them unless you want everyone seeing them - there are options for catering and food disposal, you walk out with a tampon in your hand after hiding behind a burning tree to change it, and it's everyone's business.
(Forced littering, privacy, P131)

Further participant quotes describing strategies for managing menstruation while deployed operationally are given in Appendix 2 (online material).

Many participants (40.1%) had said no to a deployment or shift because of their menstrual cycle. Of concern, 7.2% of participants reported that they had experienced physical health issues (e.g. toxic shock syndrome, urinary tract infections) arising from menstruation management or toileting during deployments or shifts. Adjustments in the use of menstrual products to accommodate deployments or shifts was reported by 59.4% of participants. Adjustments were largely directed towards managing period characteristics in relation to the critical longevity or situational environment of deployment. The use of dual products (e.g. a menstrual cup and period underwear, or a tampon and pad), or less preferred products, during deployment assisted with mitigating the uncertainty of toileting, avoiding leakage, increasing absorbency and increasing the time between product changes. Participants described some common practices:

I use disposables when firefighting, whereas normally at home and in the ICC I use period undies, which I prefer. It is not really feasible to take your entire pants off to change on the fireground!
(Product adjustment to deployment environment, P218)

If I'm not (on a) deployment I would normally use pads but during deployments I will use period underwear as you can wear them for longer between changing them which allows me peace of mind when I don't know when a bathroom stop will be.
(Product adjustment to critical longevity, P60)

One of the driving factors behind a shift from disposable menstruation items such as tampons and pads to reuseables such as cup and underwear was a lack of appropriate places to dispose of these when on deployment or undertaking remote mitigation activities. Lack of private and hygienic places to empty and replace the cup can still be challenging.
(Product adjustment to deployment environment, P96)

Table 2: Summary of open-ended qualitative responses describing aspects of managing menstruation during deployment. For analysis, S = summarised into a list of common activity occurrences of T = inductive thematic analysis showing emergent themes. The full questionnaire is available in Appendix 1 (online material).

Topic and question	Words contributed	*n*	Analysis	Emergent themes
Topic 1: Demographics and operational duties				
Q1.4 Describe your operational role	4,050	285	S	n/a
Topic 3: Period management while deployed operationally				
Q3.4 Describe how you manage your periods during operations	20,871	229	T	• Toileting facilities are crucial to period management (privacy within the limitations of field locations, changing products, disposing products, personal menstrual hygiene, scheduled breaks). • Choice and use of menstrual products to accommodate deployment (comfort, absorbency, avoiding leakage, adjustment of product use for deployment, menstrual suppression). • Preparation for menstruation during deployment (planning, purchasing and carrying preferred or additional product supplies, supplies for used product disposal, supplies for symptom management). • Avoidance of deployment (because of situational longevity, period characteristics, menstrual symptoms, lack of facilities, fear of leakage, fear of menstrual status discovery). • Adaptive unease may accompany menstruation management (finding privacy privately, carrying used products in pockets or backpacks, taking health risks, littering, complying with situational safety awareness).
Q3.7 Menstrual symptoms and effects on capacity to conduct operational duties	5,614	157	T	• Active continuation despite the discomfort of menstrual symptoms (push-on, suck it up, power through, get on with things, never let it interfere). • Strategies for masking or minimising menstrual symptoms before, during and after deployment are frequently enacted (use of over-the-counter pain medication (ibuprofen, paracetamol), hydration, nutrition, sleep, increased attention to fatigue levels, self-management or disclosure of altered mood). • Adjustment of menstrual product usage (double products to avoid leakage or increase time between product changes). • Modifying routines in response to symptoms (avoiding deployment, IMSAFER checks, specific task or location avoidance, alternative tasks, shorter days).
Q3.10 Adjustments to menstrual products to accommodate deployments	2,917	135	S	n/a
Q3.13 Use of menstrual suppression	1,481	59	S	n/a
Topic 4: Period stigmatisation in operational settings				
Q4.9 Describe comments or behaviours experienced	2,311	42	T	• Inaccurate attribution of women's behaviours, moods or requests to menstrual status (derogatory comments about time of the month in response to requests or instructions). • Strategies used for counteracting stigmatisation. • Acknowledgment of support from male colleagues. • Inattention to men's behaviours as the source of perceived irritation.
Topic 5: Supplementary views on menstruation and deployment				
Q4.15 Additional comments not covered in other topics	7,058	113	T	• Toileting needs (privacy, bodily functions, menstrual product disposal, menstrual hygiene, rights and equity). • Menstrual hygiene supplies as standard kit (counteracting menstrual characteristics, normalising menstruation in deployment practice, supporting operational readiness). • First-responder identities (getting on with the job while also attending to menstruation, competencies, fears of embedding stereotypes). • Understanding and normalising menstruation in deployment practice (talking, training, mentoring, advice, reducing stigma and taboos, supportive colleagues and cultures).

The impacts of menstrual symptoms on operational duties varied among participants with 24.4% reporting no impact, 64.1% reporting some impact and 11.5% reporting a great deal of impact. For participants reporting some or a great deal of impact, thematic analysis of the impacts of menstrual symptoms on operational duties revealed attitudinal behaviours that support active continuation, perseverance and commitment through menstrual discomfort (Table 2). Menstrual symptoms are actively managed with the use of over-the-counter medications (e.g. paracetamol, ibuprofen) and attention to hydration, nutrition, fatigue, mood and self-care (Table 2). Routines are also commonly altered to adjust to menstrual symptoms (and their interaction with period management), including declining deployment, avoiding certain tasks or changing the type and location of duties (Table 2). Practices of active continuation, symptom management and task adjustment were reported by participants:

Menstrual symptoms don't impact the way I carry out duties, they just make it harder for me physically and mentally to do the job…That is to say, the outcome of conducting operational duties is the same but it takes much more physical and mental effort.
(Active continuation, P33)

So far my menstrual symptoms haven't influenced my operational duties significantly, at least not that I am aware of. There may have been some decrease in concentration and increased tiredness, which could have influenced my performance especially in the control centre. This does not affect my performance on the fireground though. The tasks and circumstances on the fireground make me forget that I am on my period. I take paracetamol for headaches.
(Active continuation, symptom management, P191)

I find that I fatigue more easily while having my period. I also need to go to the toilet more often, which is inconvenient when in the field. I also find that at the end of a shift when I am sore and tired, I'm more sore and tired when I've had to worry about managing my period all day, and my lower back pain / cramps can be compounded by the hard physical activity of firefighting.
(Active continuation, P34)

Headaches, cramps and back pain were sometimes an issue, but manageable with pain killers. Periods never affected my response to deployments.
(Active continuation, P69)

Pain and fatigue are the main culprits – I carry painkillers (Panadol/ibuprofen) in my bag and keep food/snacks to eat to help with fatigue.
(Symptom management, P36)

I get a lot more tired and so if I can choose to do so I will do shorter days. If I can't choose, I will just battle on through until I can get home and fall asleep.
(Active continuation, task adjustment, P29)

I have paracetamol on hand and will use super pads to allow for a long time between changes. I have also taken a role as assistant to the strike team leader in a forward command vehicle rather than actively fight fires on a truck as it is more comfortable.
(Symptom management, task adjustment, P47)

…I carry generic over the counter painkillers which is effective at managing my pain levels and doesn't impact my cognitive function. If I'm angry, snappy or agitated I feel mostly comfortable enough sharing with my colleagues that I've got a case of PMS or asking to be put on a specific task that will keep me from potentially clashing with anyone inappropriately. I haven't had a scenario at an incident where I haven't been able to operate effectively due to pain or discomfort.
(Symptom management, P166)

Further participant quotes describing the effects of and responses to menstrual symptoms while deployed operationally are given in Appendix 2 (Online Material).

The use of menstrual suppression (stopping periods through the use of hormonal contraceptives) specifically to accommodate deployments or shifts was reported by 26.1% of participants. Operational readiness was often mentioned as a driver of the use of menstrual suppression, but participants who had used menstrual suppression held a range of views about their comfort with this practice as part of menstrual and reproductive health:

I am ex-military and would do this often for deployments and field exercises.
(Operational readiness, P37)

It contributed to my decision to take the pill. Over summer I don't have periods to be safe if I am deployed.
(Operational readiness, P49)

I used to take the contraceptive pill to reduce the heaviness of my period to be more available for deployments and to improve acne. I no longer take the pill due to not wanting to be on this long term. I do not feel that menstrual suppression is healthy.
(Operational readiness, reproductive health concerns, P65)

Topic 4: Period stigmatisation in operational settings

Incidences of period stigmatisation by colleagues were present but relatively infrequent in the study sample. Most participants had not experienced targeted, unwanted or

assumptive comments from colleagues about their own menstrual status and the conduct of their duties nor had they observed comments made about others (Figure 6). However, period stigmatisation was experienced or observed by about 25% of survey participants. Targeted, unwanted or assumptive comments about a participant's menstrual status and conduct of duties most commonly (but not always) came from men, sometimes (but not always) from supervisors, and generally caused offence (Figure 6a). Overhearing targeted, unwanted or assumptive comments about the menstrual status of others and conduct of duties also commonly (but not always) came from men, sometimes (but not always) from supervisors, and generally caused offence (Figure 6b).

Thematic analysis of the reported experiences of period stigmatisation commonly described inaccurate attribution of behaviours, moods or requests to menstrual status (Table 2). Also revealed were accompanying strategies used to counteract stigmatisation, and acknowledgment of the importance of support from male colleagues (Table 2). Participants noted:

> *Just the odd derogatory comment about women being 'on their period' and being moody etc. which I shut down very quickly.*
> (Inaccurate attribution, counteractive strategy, P95)

> *It is extremely annoying as a female officer to have a correction to someone's behaviour or work mumbled about as "must be her time of the month". As I have got older and more experienced I will not tolerate it any longer and will take the person to task. Depending on their vulnerability I will take them aside and discuss it or I will simply call them out then and there. It has been an extremely rare thing to happen in my experience and always felt that the majority of members were extremely aware of the problems it caused for women on the fireground.*
> (Inaccurate attribution, counteractive strategy, P149)

> *As I went through menopause I had a particular experience of coming home from a fire on a very hot day after the cool change had come through, sitting 4 across the back in a Cat 1 with me in the middle and getting a hot flush. The crew were absolutely wonderful and immediately wound down all the windows helped me out of my jacket and just carried on with their usual banter of the homeward journey. Those things really matter.*
> (Support from male colleagues, P149)

Further participant quotes describing experiences of period stigmatisation while deployed operationally are given in Appendix 2 (online material).

In an operational setting, many people (42.6%) had disclosed their menstrual status to others, while others (56.6%) had not. Of those who disclosed their menstrual status, most (60.7%) felt 'very' or 'somewhat' comfortable with the response to that disclosure, while some (34.0%) felt 'very' or 'somewhat' uncomfortable with the response. The majority of participants (59.3%) preferred to keep their menstrual status completely private in the workplace, while others preferred to keep their menstrual status somewhat private (36.5%) or not at all private (3.8%). Most participants (66.8%) felt that the topic of menstruation should be discussed openly by everyone, men and women, while others (8.7%) felt that the topic of menstruation should only be discussed among women or not openly. Many (23.7%) did not agree that the statements about openness described their feelings. Thus, even though incidences of period stigmatisation are relatively infrequent in this sample, many participants were negotiating the co-existence of personal privacy preferences alongside beliefs that the topic of menstruation should be normalised.

Topic 5: Supplementary views on menstruation and deployment

Four themes were identified from analysis of participant supplementary views about managing menstruation while deployed operationally. First, toileting and hygiene in operational settings, particularly in the field, was front-of-mind and echoed the theme extracted in Topic 3. Access to toilets for urination, defecation and menstruation management, privacy for field toileting, maintaining hygiene (e.g. clean hands), disposal of used menstrual products and planning for toilet breaks were commonly stated views (Table 2). Worker rights, equity or health and safety framings suggested a perceived inattention to toileting as part of operational settings. Participants noted:

> *I feel it doesn't affect the job. What does need to be addressed is proper facilities. Males just urinate in the bush. Or they get porta toilets for bowel movements but there is nowhere to discretely or even at all dispose of menstruation products when away from stations on jobs or on deployment…You want to do the task without highlighting the fact…I don't think we need to make our male colleges talk about it with us. We just need to be able to discretely manage menstruation and a lot of time in logistics that isn't even a thought.*
> (Toileting inattention, equity, P62)

> *I believe that having access to bathroom facilities and access to toilet breaks on deployment or while on a callout is a right that all male and female volunteers should have. This is a major issue that needs to be addressed. My brigade shed doesn't even have a bathroom, which is fine for the men or so they tell me, but as the only active female in the brigade, it is quite frustrating that I can't access a bathroom while on a callout, training, brigade meeting or doing brigade maintenance.*
> (Toileting inattention, equity, P205)

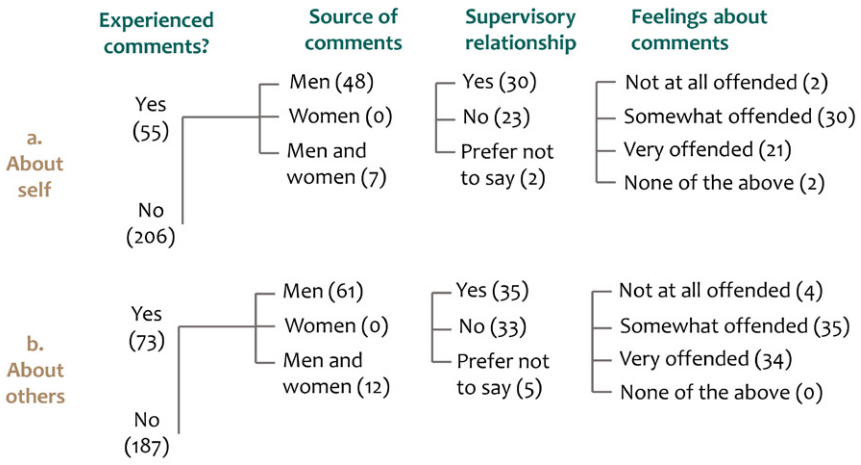

Figure 6: Experiences of targeted, unwanted or assumptive comments from colleagues about a) one's own menstrual status and b) another person's menstrual status. The first branch shows the number of participants with this experience, the second branch who the comments came from, the third branch identifies a supervisory relationship and the fourth branch reports how the participant felt upon hearing those comments.

> *…I think about people who come from backgrounds of sexual assault or from more conservative religious backgrounds than myself and think that offering better toileting facilities will help them be more comfortable.*
> (Toileting inattention, equity, P29)

> *I feel like managing menstruation in operational settings is pretty similar to managing pooing in operational settings; no one talks about it but everyone just gets on with it. Everyone poos, and everyone either menstruates or knows someone who does…*
> (Toilet access, bodily functions, P221)

Second, the idea that menstrual hygiene products should be, or were already, part of standard 'kit' on appliances, in base camps and, in operations centres was commonly mentioned (Table 2). Participants noted how supplies could counteract characteristics of periods such as irregularity or heavy flow, or the uncertain circumstances of operational environments, thereby maintaining operational readiness. A menstrual kit is also a visible mechanism to normalise menstruation and relates to the broader theme of normalisation extracted below. Participants noted:

> *We now have (organisation) issued feminine hygiene packs on the trucks. It's a great step to inclusion. And a subtle way of making the men aware it's an issue. We need to make it normal to talk about.*
> (Normalisation, P49)

> *Some time ago we put tampons on our fire trucks at the brigade I volunteer with, these were well received until we got a new captain who disagreed with it so they were removed. It's only in the last 12 months that the brigade executive agreed to put them back on the trucks and are now a standard item on the weekly check lists.*
> (Normalisation, P120)

> *Vehicles (trucks) need to have menstrual products at all times as women can be caught short or underprepared, especially at menopause or puberty.*
> (Counteracting period characteristics, P69)

> *At my brigade there had been no consideration for the female or menstruating members. Since I joined, I have fought for certain things on all appliances to ensure our ability to turn out at any time of the month.*
> (Operational readiness, P248)

Third, responder identity and competency being independent of menstruation status was commonly expressed by participants (Table 2). Self-identity as first responders who are competent, effective and get on with the job while also managing menstruation across a spectrum of ease to difficulty, were described with various narratives. These narratives may have been offered at the end of the questionnaire to counteract the bounded items that asked about menstruation management practices and period stigmatisation experiences. Dichotomies about wanting to normalise menstruation versing attention on menstruation being used to embed existing gender stereotypes or to limit opportunities in male-dominated operational cultures were also raised. Participants noted:

> *Women are more than capable of getting the job done, whether they are menstruating or not.*
> (Responder identity, P168)

> *I don't actually think it's an issue at all. The more basic need to have access to bathroom facilities is probably far more important. I've never needed accommodations to be made because I may or may not have a period, and I've never been on a crew with any other female who has either.*
> (Responder identity, P160)

I take the approach that it's not going to hold me back, but I do have to prepare for it…I know that if I am in a prolonged situation with respite not certain, that I may, at worst case scenario bleed through my uniform. If that were to happen, well too bad for those who may be offended. My focus is on preservation of life not someone's sensibilities. There have been scenarios where I have been in a vertical rescue harness for over three hours, there is no option to urinate, change tampons etc. It is what it is and due to being hyper-focused on the task at hand I don't find it an issue.
(Responder identity, P234)

…It can be seen as creating another stereotype to manage, but the reality is that people are going to be uncomfortable before it gets better and we have to recognise that we have to stand up to the base level gender discrimination and push beyond. That will make people uncomfortable, but also it might just make men more aware of the silent struggles we women were fighting on the frontline.
(Embedding stereotypes, P196)

In the past I was always quiet about menstruation as I didn't want to create another reason that may be seen as why women shouldn't be on fire ground. Now that I am older and in a brigade with confident outspoken women I embrace being open and discussing managing menstruation in an operational setting.
(Embedding stereotypes, P124)

Let's not give people more ammunition for exclusionary behaviours please.
(Embedding stereotypes, P85)

Fourth, understanding and normalising menstruation in operational settings was seen as an important endeavour (Table 2). Including menstruation in training and operational practice, talking openly about the topic, learning from experience, connecting with colleagues for support and reducing menstrual stigma and inequality were mentioned by participants as different pathways to understanding. Participants noted:

I think opening up a dialogue about menstruation would be a good thing, seeing as many females are now taking on roles within emergency services. It shouldn't be something to be ashamed about and having information, education and help will benefit all members.
(Dialogue, P104)

I don't feel it's up to the 'organisation' to manage menstruation in operational settings but rather to work on de-stigmatisation and general supports for women in operations……
(Dialogue, P146)

I think managing your period while being deployed should be covered as part of basic training. This should be attended by both men and women…. I would be happy to talk about it. Share my experiences, if it helps.
(Training, P191)

As a training instructor, I have started discussing this topic with learners at (courses). I talk about it from an operational preparedness perspective: asking women to consider how their menstrual cycles may impact their ability to perform their duties, and how they might prepare for/manage this, and asking men to bear this in mind when a female colleague asks for toileting concessions over and above what they might consider "normal".
(Training, P213)

I think that the issue does not need to be forced as a topic to be discussed. The women in our brigade talk openly. I don't discuss it with the male members. But I know if I needed to they would respect and assist in any way if I requested.
(Support from colleagues, P178)

The men in my brigade have been supportive and have never made this an issue. They have wives and children and so this is part of their lives.
(Support from colleagues, P184)

Further participant quotes describing supplementary views of menstrual management while deployed operationally are given in Appendix 2 (online material).

The unexpected responses received from non-menstruating men suggest an interest in, and support for, understanding menstruation during deployment. Comments aligned closely with the themes of toilet facilities, situational environments and support as identified by participants who menstruate:

As a male crew leader, I ensure that the women in the crew look after each other in regards to managing menstruation. And if any issues arise then I am available any time to listen privately.
(Support from colleagues, Male 6)

…in my time I have seen almost all females under my command manage themselves with few issues. However, there are issues, the main ones being working in remote areas…, lack of understanding for females when toilets in the field are implemented…, control centres being geared for smaller numbers of staff that is way exceeded in large long-duration incidents…, lack of laundry facilities…
(Toileting, hygiene, privacy, Male 7)

Discussion

The circumstances faced during operations are characteristically physical, situational or time-critical. The findings of this study show that navigating and solving the interplay between periods and the demanding circumstances of deployment is given substantial consideration by the women and non-binary participants in this study. They actively find solutions to the various routines, etiquettes and discomforts of menstruation to maintain service to their operational roles, responsibilities and duties. They find these solutions despite the frequently challenging influences of period character and menstrual symptoms, menstrual products, toileting, privacy and stigmatisation. Such attention to managing menstruation in the demanding circumstances of deployment suggests an identity formation that merges the professional with the menstrual-bodied self, which I label as 'first responders who also menstruate'. The active problem-solving and service to professional roles identified in this study is similar to that reported in the few studies that have examined menstruation management in other extreme environments, for example the military (Phillips and Wilson 2021), Antarctic expeditions (Nash 2023) and hospitals (Rimmer 2021). This study is the first (to the author's knowledge) exploring menstruation in the Australian emergency management sector and has observed the practices and experiences of personnel deployed operationally during natural hazard events.

Freedom to participate in all spheres of life, including employment, is a pillar of menstrual health (Hennegan et al. 2021). However, that freedom is often invisibly bounded. Sang et al. (2021) suggested that those who menstruate have additional and distinctive physical and emotional labour to carry out, which they termed 'blood work'. Aspects of blood work include managing the messy, painful, leaky body; planning access to facilities; avoiding feelings of shame and being stigmatised; and, managing workload in relation to menstruation (Sang et al. 2021). In this study, blood work occurs in the context of the way that women and non-binary participants found solutions to maintain service to their operational roles, responsibilities and duties. In the already demanding circumstances of deployment, participants devoted additional physical and emotional labour to pain management, avoiding leakage, finding facilities, concealing and disposing of used products, suppressing periods with hormones, planning ahead, buying and storing a range of products, bodily hygiene, pushing through discomfort, adaptive unease, forgoing deployment opportunities, concealing menstrual status, adjusting mood, explaining themselves to others, maintaining privacy, caring for self, caring for others, correcting behaviours, reducing stigmatisation for self and others and lobbying for practice change.

That this additional labour is contributed by staff and volunteers in service to operational roles and responder identities is a remarkable testament to the capabilities and commitments of women, non-binary and other gender identified people within the Australian emergency services sector who menstruate. Such labour is unlikely to be recognised through the standard markers of remuneration, allowances, performance appraisal or promotion.

Despite the prevalence of active strategies to manage menstruation while deployed operationally, access to toilet facilities and/or field toileting privacy was consistently identified as an important factor influencing success. Timely changing of menstrual products; the disposal, storage or washing of used menstrual products and attending to menstruation-related bodily hygiene were closely connected to toileting, although participants often noted that toileting supported the bodily functions and wellbeing of all people (e.g. for urination and defecation as well as for menstrual hygiene). The intersections between toileting, privacy and menstruation management resemble those reported in other extreme settings. For Antarctic expeditioners, managing bodily fluids requires practice and pre-planning in shared spaces and within strict temperature-safety and waste-management policies (Nash 2023). For military women, the lack of toilets and showers negatively affected attitudes towards menstruation (Trego and Jordan 2010). A report on toileting in field-based electrical trades showed that women's amenities were frequently treated as an inconvenience, improperly and/or irregularly serviced or not provided at all (ETU 2021). As suggested by Nash (2023), toilets might be sites used to maintain hegemonic masculine norms and control access to male occupational domains. The diverse range of roles and tasks described by study participants occur within a spectrum of toilet forms, from a built incident control centre or command centre to a temporary staging area to a remote field site. Understanding and supporting the best practices and logistics of toileting in these different operational settings would benefit all deployed personnel.

The World Health Organization calls for menstruation to be recognised, framed and addressed as a health and human rights issue; not as a hygiene issue (World Health Organization 2022). Menstrual health is the state of complete mental, physical and social wellbeing that includes access to information, supportive facilities and services, treatment and care for menstrual-cycle related discomforts and disorders, a positive and respectful environment, choice of participation and freedom from menstrual-related exclusion or stigmatisation (Hennegan et al. 2021). Accommodating menstrual health is increasing as a focus of workplace law and policy. British Standard 30416:2023 seeks to 'assist organisations to understand which actions relating to menstrual and peri/menopausal

health can be taken to protect the welfare of employees in the workplace, and to make the work environment more suitable for everyone' (BSI 2023, p.2). In Australia, the Senate Community Affairs References Committee is undertaking an inquiry into issues related to menopause and perimenopause. The terms of reference include (but are not limited to) workforce participation and productivity; the level of awareness among employers and workers of the symptoms of menopause and perimenopause and the awareness, availability and usage of workplace supports (Parliament of Australia 2024). An independent review of workplace culture and change at the Australian Antarctic Division, commissioned following the study of Nash (2023), made recommendations to improve workplace safety, including a holistic approach to people, safety and inclusion on-base in Antarctica (Russell Performance Co. 2023). Studies in US military settings suggest that the promotion of women's health in all aspects, including menstruation, supports professional soldier identities and maintains operational readiness within a traditionally gendered occupation (Phillips and Wilson 2021; Chua 2022). However, acceptance of menstrual health in Australian workplace settings is not entirely resolved in debate, law or practice. For example, Nash (2023) questioned whether, in building inclusive field environments, menstruating Antarctic expeditioners should have to adapt to cisgender male-dominated field environments or whether organisations must adapt to the presence of menstruators. Goldblatt and Steele (2019) remind readers how anti-discrimination laws have been evoked to fight 'protective' functions preventing reproductive women from accessing certain occupations and that clear prohibitions against discrimination on the basis of menstruation do not yet exist. The findings in this study about toileting, active menstrual management strategies, responder identities, deployment avoidance and period stigmatisation indicate that much experiential knowledge is held within emergency service agencies and that health policies and guidelines cognisant of managing menstruation in the extreme circumstances of deployment could be built from that knowledge.

This study revealed that most participants learnt how to manage their periods during deployment by 'figuring it out themselves', sometimes from colleagues but rarely through induction or training. Qualitative responses signalled a desire for improved understanding and normalisation of menstruation as an aspect of operational practice. However, desire to know more and to de-stigmatise and normalise discussion of menstruation while deployed operationally was also sitting alongside a range of individual preferences for maintaining menstrual privacy in operational settings. The socio-cultural origins of menstrual stigma and taboos are complex but have many documented negative consequences for women's health, sexuality, wellbeing and social status (Johnston-Robledo and Chrisler 2013). People who menstruate may have internalised hostile-sexist, pathological-behavioural or pollution beliefs, become hyper-vigilant about revealing menstrual status or self-police and monitor presentation through the lens of a critical male gaze (Johnston-Robledo and Chrisler 2013; Nash 2023). Incorporating menstrual education into practice reforms or organisational training would require a sensitive and stigma- or trauma-informed approach that does not inadvertently override the prevailing independence and self-determination reported here as active strategies to manage menstruation in the challenging circumstances of deployment. Listening, documenting and experiential co-learning for flexibility and inclusion may be a path as suggested by the findings of this study.

Social meanings of menstruation by men are often constructed as negative (menstruation as disgusting, to be hidden or controlled) or hostile-sexist (the menstruating woman as irrational, demanding or dangerous) (Peranovic and Bentley 2017). Peranovic and Bentley (2017) found another social construction whereby the views of men (positive and negative) about menstruation were formed through important relationships with girls and women in their lives. All social constructions were revealed in this study. The unexpected interest of men in the survey, and the support from men frequently reported in operational settings by women and non-binary study participants, suggests that many men are seeking to understand menstruation and assist those with whom they have important team or supervisory relationships. Conversely, reported incidences of period stigmatisation may reflect pervasive negative or hostile-sexist views of women and non-binary personnel who menstruate. However, this study was not designed to include men who do not menstruate and there is a need for further research about their perspectives of menstruation during deployment.

Study limitations and future research

There was substantial bias in the sample towards experiences of managing menstruation in firefighting settings (Appendix 2, online material). Initial and follow-up recruitment requests were sent to emergency service agencies in each state and territory but it is not possible to ascertain if requests were ultimately approved and actioned for posting in internal staff bulletins. Recruitment was enhanced in a rural fire agency with a defined research adoption strategy and resourcing. One participant noted:

> *This is the first time I've seen the service openly use the word menstruation, in their newsletter where they advertised this survey. I was shocked but happy to see it. We have so many amazing people who menstruate in the service and we need to talk about this more often…* (P204)

An exploratory research approach was adopted to examine practices and experience of menstruation during the challenging circumstances of deployment because there was little background literature or previous examination of this topic within the Australian emergency services sector. An explanatory approach, with a different aim and study design, might be applied in further work to test statistical relationships between dependent and independent menstruation variables and demographic co-variates, for example.

It was not the intent of the study to deliver organisational or operational recommendations, only to understand the practices and experiences of menstruation in the extremes of deployment. The voices of participants suggest that responder identities and the labour of problem-solving and independence by people who menstruate must be respected, while also recognising that externalities such as toileting, operational routines, education and training are potential areas of organisational improvement. Future research might ask personnel about how to translate the findings of this study into operational practice, training, logistics and management. Future research might also consider field toileting as a topic of significance; the opportunity costs of choices to avoid deployment or specific tasks; explore how, where and why menstruation stigma and taboo occurs in the emergency management sector and the influence of specific conditions such as endometriosis on managing menstruation while deployed operationally. Given the reported significance of toileting for managing menstruation, equivalent research might explore men's experiences of managing bodily functions in the extreme circumstances of deployment. The interest of men in this study suggests that it would also be useful to collect views of male-identified personnel about aspects of menstruation management during deployment.

Conclusion

The inevitable intersection between menstruation and occupation is particularly prominent for people deployed operationally in the emergency services where environmental, time or situational criticality may disrupt regular routines of menstrual management. The findings show that people who menstruate navigate the criticalities of deployment and actively find ways to adjust and adapt menstrual management to maintain service and commitment to their operational roles, responsibilities and duties. For some people adjusting and adapting is reasonably easy, but for most there are difficulties of period character, menstrual symptoms, menstrual product limitations, privacy, operational practices and taboos or stigmas to overcome. Attention to menstrual health in workplace settings is increasing and is likely to eventually require organisational leadership and policy responses with greater complexity arising in male-dominated and extreme environments. Both are characteristics of the emergency services sector. Support for women's menstrual and reproductive health as a normalised part of responder identity is a worthy aspiration, advantaging greater workforce participation, equality and diversity. One participant summed this up:

> *I believe that women are excellent at managing themselves and their periods for the most part. Some things are beyond their control and difficult to manage, but we do what we can in the situation. I do also believe things could be made a little easier for women to manage this part of themselves that occurs naturally and yet tends to be a taboo subject. I feel incredibly uncomfortable disclosing my menstrual status to anybody in the workplace or operational setting. But it should not be that way, it should be discussed as openly as any other health matter.* (P112)

Acknowledgments

Sincere gratitude is extended to participants in this research who generously shared their experiences. Thanks are extended to the organisations and individuals who promoted the survey. Heath Stimson and Amy Lykins provided advice about the terms and language used in the questionnaire. The comments from 2 anonymous reviewers greatly improved the manuscript. This research was inspired by the work of Meredith Nash with expeditioners in the Australian Antarctic Program, which piqued my curiosity about the experiences of menstruation in the similar types of extreme environments in the emergency services sector.

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Conflict of interest declaration

The author is the Editor-in-Chief of the *Australian Journal of Emergency Management* and did not participate in editorial processing of this manuscript.

Appendices 1 and 2 (online material)

Appendix 1 is the questionnaire administered to participants.

Appendix 2 is the qualitative data used in this research.

https://knowledge.aidr.org.au/resources/ajem-july-2024-managing-menstruation-while-deployed-operationally-experiences-from-the-australian-emergency-management-sector/

Abstract

During emergencies, infants and young children are vulnerable. However, Australia lacks emergency planning and guidance specifically addressing the needs of these children and their caregivers. A total of 256 caregivers (predominately mothers) of children aged 0–4 years were surveyed or interviewed about their experiences during and after the summer bushfires in Australia in 2019–20. In addition, 63 emergency responders were surveyed or interviewed regarding their experiences supporting families with young children, including during the 2019–20 bushfires. Analysis of the surveys and interviews revealed parents were under prepared for the bushfires and preparedness was hampered by a lack of tailored guidance for families. Evacuations were often delayed due to lack of planning and were complicated because of the continuing care needs of children. Evacuation centres presented numerous child-safety risks and women who evacuated on their own particularly struggled to care for their children. Parenting children after the bushfires could be challenging and reports of child behaviour difficulties suggest the effects of the emergency on parents had adverse affects on children. Recovery interventions largely overlooked children younger than school age. Caregivers of infants and young children require targeted preparedness, response and recovery support. This research provides evidence to inform planning and to guide development.

Experiences and support for caregivers of infants and young children: 2019–20 bushfires

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SUBMITTED
16 January 2024

ACCEPTED
24 May 2024

DOI
www.doi.org/10.47389/39.3.34

Introduction

During emergencies, infants and young children experience heightened vulnerability due to their specialised nutritional needs, immature immune systems, greater susceptibility to heat, dehydration and cold, and total dependence on others (Gribble et al. 2019). These needs contribute to challenges faced by their caregivers (Nelson et al. 2002; Pascoe Leahy and Gay 2023), particularly mothers who may be pregnant, newly post-birth, or breastfeeding (Ratnayake Mudiyanselage et al. 2022; Evans et al. 2022). Despite this, Australia has lacked emergency planning and specific guidance tailored to the needs of infants and young children (Gribble et al. 2019).

In response to this, the Australian Breastfeeding Association's Community Protection for Infants and Young Children in Bushfire Emergencies Project (ABA Bushfire Project) was launched with funding from the Australian Government. Based in Eurobodalla Shire on the New South Wales South Coast, the ABA Bushfire Project aims to enhance community resilience by improving emergency preparedness for caregivers of infants and young children in disasters. The first stage of the project is the research reported here, the Babies and Young Children in the Black Summer (BiBS) Study. This research gathered evidence to inform emergency planning, guidance and interventions for families with infants and young children affected by emergencies.

Method

A survey was conducted of caregivers of children 0–4 years who were affected by the 2019–20 summer bushfires and of emergency responders who had supported families during or after these bushfires. The survey used the online platform, Qualtrics® and contained open- and closed-ended questions. The survey was open to participants from anywhere in Australia to gather a breadth of information from a diverse and large number of individuals. Interviews were also undertaken with parents of children

0–4 years who had experienced the bushfires within Eurobodalla Shire or surrounds. This was to add an in-depth understanding of parent and child emergency experiences within one community. Finally, emergency responders who had supported families in any Australian disaster were also interviewed to gather in-depth information about the views and experiences of this group.

Survey participants were recruited through advertisements on social media. Parent interviewees were recruited via advertisements on social media, in local media, in community fliers, snowball sampling and purposeful sampling. Emergency responders who completed the survey were given an option to nominate willingness to be interviewed and were also recruited by snowball and purposeful sampling. Interviews were conducted alongside and following survey data collection and were undertaken by telephone, Zoom® or in person. All parent interviews were conducted in person. Emergency responder interviews were conducted by Zoom® or telephone according to the preference or internet bandwidth of the interviewee. Interviews were recorded and transcribed. Data was collected between August 2022 and February 2023.

Surveys and interviews explored parents' experiences of the 2019–20 bushfires, including during evacuations and in recovery. Parents were asked about emergency preparedness, what they had packed for their children when they evacuated, where they evacuated to and their caregiving experiences during and after the bushfires. Emergency responders were asked to describe how they had supported families with very young children and what they observed had helped parents and children or not. Quantitative data was analysed using descriptive statistics and qualitative survey and interview data were uploaded to NVivo v14® and analysed alongside each other using conventional content analysis (Hsieh and Shannon, 2005).

Ethics approval was granted by the Western Sydney University Human Research Ethics Committee (approval H15019).

Results

A final number of 233 parents and caregivers completed the survey. Of this, 97% were female. Survey respondents were predominantly from New South Wales (77%), 50% were in the age range 30–39 years, 55% were in households with an income of less than $100,000 per annum and 61% had a university degree or postgraduate qualifications. Demographic information on parent survey participants is shown in Table 1.

Of the total, 176 survey participants provided information about the children in their care at the time of the bushfires. They had 360 children between them ranging from newborn to 17 years of age; 11 children were less than one month, 61 children were 1–11 months, 46 were 12–23 months and 105 were 24–47 months of age.

Table 1. Demographic characteristics of BiBS survey parent and caregiver participants.

Personal characteristic	N=233
Sex	
Female	226
Male	7
Age	
20–29	22
30–39	116
40–49	95
50 and over	3
State of residence	
New South Wales	179
Australian Capital Territory	12
Victoria	29
South Australia	5
Queensland	4
Outside Australia	3
Unknown	1
Household income per annum	
Less than $40,000	26
$40,000–$59,999	34
$60,000–$79,999	30
$80,000–$99,999	39
$100,000–$124,999	45
$125,000–$149,999	17
$150,000–$199,999	26
$200,000 and over	16
Highest education level attained	
Year 10	9
Year 11	1
Year 12	13
Certificate or trade qualification	38
Diploma	29
Degree	64
Postgraduate	79

Parent interviews were conducted with parents (22 mothers and one father) who had from one to 4 children (total of 44 children), from newborn to 7 years (average 2.3 years). Overall, for both the survey and interviews, 15% of the mothers who participated in the study were pregnant at the time of the bushfires.

There were 63 emergency responders who were surveyed or interviewed. These participants were in a variety of roles including health worker (doctor, nurse, midwife), emergency health manager, evacuation centre manager or volunteer, domestic violence manager, disability support specialist, donations manager, housing case worker, child-friendly space worker, family support recovery worker, foster care manager, catering manager, early childhood educator, social worker or recovery case manager. These emergency responders worked for organisations including the Red Cross, Salvation Army, Country Women's Association, 54 Reasons, Ambulance Service, Rural Fire

Service, local government, state government health or welfare departments, or had volunteered independently.

The findings from the surveys and interviews were consistent with each other while the findings between the parent and caregiver and emergency responder participant groups complemented each other.

Preparedness

The majority of surveyed parents were underprepared for the bushfires and indicated that they lacked a bushfire plan at the beginning of the bushfire season (65%). Of these, only half made a plan during the bushfires. Nearly 30% never made a plan. Among those who did make plans, the main sources of guidance were a fire service website (25%), government emergency website (24%), advice from family or friends (24%) or 'Bushfire Ready Day' events (12%). When making their emergency plan, 17% developed it without external help. Although 75% of parent participants packed an evacuation kit for their infant or young children before or during the bushfires, most did so without external guidance.

Parents described how a lack of detailed guidance for infants and young children hindered their emergency planning and packing for an evacuation.

> *The main sources of information didn't have age-specific advice.*
> (Mother of 3, aged 2, 3 and 12 years)

> *There was no information about what to pack for young children and no acknowledgment about how hard that is.*
> (Mother of 2, aged 3 and 5 years)

Evacuation experiences

Of the surveyed parents, 85% evacuated during the bushfires and 40% indicated that they had less than an hour to prepare. Over a third left later than intended, often due to packing items for children, caring for others or managing pets. One woman delayed evacuation suspecting she was in labour. Several women blamed their male partners for their delayed evacuation including one who said, 'Husband prevented me from leaving as I was "being dramatic"' (survey).

Of note, 3% of parent participants who were advised to evacuate did not. Reasons included child-related issues such as avoiding smoke and the difficulty of evacuating with young children.

> *My son was a premmie baby. I stayed to try and avoid too much smoke for him.*
> (Mother of one, aged 3 months)

> *I had a 6-week-old and a 20-month-old and was not confident in handling 2 infants by myself out in the open at the beach and thought the house was the safest place until there was an immediate threat.*
> (Mother of 2, aged 6 weeks and 20 months)

Caregivers mostly evacuated to homes of a friend or a family member nearby (37%) or further away (18%). Caregivers also sought refuge in official evacuation centres (20%), at outdoor venues like a beach or sports field (9%) and at unofficial evacuation venue buildings (4%).

Factors that added to evacuation challenges included that parents did not know which evacuation venue would be suitable for children. They also reported that their decision-making was compromised by their tiredness and they felt overwhelmed with caring for young children.

> *I did not have confidence in where was a safe place to take my children.*
> (Mother of 2, aged 12 months and 2 years)

> *I found it really difficult to make decisions as I was so exhausted already from having a baby that did not sleep very well. I found it hard to decide what to take with us to the evacuation centre.*
> (Mother of 2, aged 4 months and 3 years)

Unsurprisingly, given the lack of emergency planning, time to prepare, the physical and mental challenges of parenting and the emergency itself, it was common for parents to evacuate without supplies needed to care for their children. One evacuation centre worker participant said, 'Many families arrived at the centre with not enough nappies, formula, clothes, bedding, etc.

The continuing care needs of infants and young children posed significant challenges. This was illustrated by the experiences of mothers who had to undertake long car journey evacuations.

> *Because we were going so slowly and we didn't want to get out of the queue, there were a couple of times where I unbuckled (my baby) from his car seat and fed him while we were pretty much stopped. It was quite a dilemma for me.*
> (Mother of 2 aged 6 months and 2 years)

> *We were told we were not allowed to stop once in the convoy. (My baby) did a giant explosion poo. All over her clothes, into her hair and over the car seat. My sister-in-law changed her while we were driving.*
> (Mother of one, aged 3 months)

Evacuation centres were often very difficult environments for families with infants and young children. This difficulty was magnified for women who evacuated on their own (a common experience) and had the sole responsibility of caring for and protecting their children; some were also newly post-birth or heavily pregnant. Mothers on their own found it challenging to keep hold of toddlers who

wandered while also looking after an infant. They were worried about keeping their children safe from strangers, animals and other dangers.

> *I didn't feel that my son was very safe in the evacuation centre - I was so busy trying to look after my baby and I felt like I would lose track of my other son.*
> (Mother of 2, aged 4 months and 3 years)

> *I was worried about drunk people, dog fights and cigarette smokers harming my babies.*
> (Mother of 3, aged 11 months, 2 and 4 years)

> *There was nowhere really suitable for my bub to sleep - I had to put him on the floor on blankets and sit with him to protect him from anyone walking/stepping on him.*
> (Mother of 2, aged 4 months and 3 years)

Emergency responders also identified safety issues at evacuation centres. One evacuation centre manager listed many concerns:

> *Low power points that don't have covers on them, that they could stick fingers and toys in, balcony steps. Some of these big halls are right next to a main road and there's not necessarily any protections outside. Things like hot water urns for tea and coffee that little ones can reach up and touch. And of course, cords and cables and you name it, lying around the centre…somebody's got their backpack lying next to their bed and they've got medication in it, or they might have a knife in it… and they're not going to be watching their items, and of course, little kids being inquisitive.*
> (Interview participant)

Buildings chosen for evacuation were noted by emergency responders participants as presenting or amplifying child-protection risks.

> *In terms of child safety, the showground is full of dark spaces, poorly lit… There's nothing about it that is safe.*
> (Interview participant)

Despite the challenges and risks, mothers often did not ask for help in evacuation centres because they were too busy looking after their children, did not know who to ask for help or did not feel confident asking for assistance.

A mother who struggled to breastfeed her 5-month-old baby in an evacuation centre (including due to lack of privacy) said, 'Lack of support during evacuation while caring for an infant was terrifying…It was unclear who was in charge or able to assist'. By the time this mother was identified as in need of support (after 12 hours), her infant required hospital treatment for dehydration.

Emergency responders explained how unrecognised needs and lack of support meant that some stressed and overwhelmed mothers made decisions that were risky or dangerous. For example, washing feeding bottles was observed to occur in (often overused and unhygienic) restroom sinks. Cultural and language issues could also play a role, as illustrated by a situation where a puddle outside an evacuation centre was used to wash feeding implements.

> *This lady was a new arrival in Australia, not a single word of English, had no support network around her at all. And for her culture, it wasn't okay to ask for help, you had to fend for yourself.*
> (Interview participant)

In another example, an emergency responder participants described how a mother tried to protect her infant from one hazard (strangers) and exposed them to another (suffocation).

> *We had a single mum in one centre … didn't tell anyone she was heading off for the shower and buried the baby under all the blankets on the bed so nobody would know that the bub was still there while she was gone.*
> (Interview participant)

Pregnant women faced additional challenges during evacuation including concerns about smoke exposure, physical demands of evacuating without assistance and fatigue due to pregnancy and caring for children. Limited access to water and suitable resting places exacerbated their struggles. One woman with pregnancy-related pelvic instability couldn't walk properly or stand for long while another, in advanced pregnancy, couldn't drive.

Parents who evacuated to a family or friend's home had more positive evacuation experiences. This was due to better access to resources such as refrigeration, hot water, suitable sleeping areas and support from other adults.

Parents and emergency responders also reported that multi-roomed evacuation venues provided better options as they allowed families with young children to congregate separately, offerred containment for small children who might wander and could be more easily made child safe (including from a child-protection perspective). Ad hoc unofficial evacuation venues in locations such as child care centres or doctors surgeries provided environments that parents and emergency responders viewed as safer and made caring for infants and young children easier.

When asked what could be done to make evacuation centres better, almost half of parent suggestions were related to having a separate space for families with young children. Similarly, emergency responders repeatedly said that the emergency response would be improved if there were appropriately resourced separate spaces for very young children and their caregivers in evacuation centres. An evacuation centre manager suggested that inspection checklists for building suitability as evacuation centres should include information related to the needs of children, including child safety and whether suitable spaces and resources for child care are available.

Parental priorities and emergency response

Women often prioritised their children's needs over their own during the bushfires. This meant, for example, some did not eat or drink properly. One mother who was breastfeeding described losing 10kg over a matter of weeks and a pregnant mother of 3 said, 'I was so worried about my kids… that I would just forget, just the simple things to eat myself, to drink'. The latter woman fainted while queuing for supplies.

When emergency responders identified and responded to the needs of parents and children, it made a difference. For example, operators of a child-friendly space in a recovery centre arranged for parents to be prioritised. This reduced the processing time from 8 hours to 2 hours and ameliorated parent and child stress and enabling access to needed support.

In another case, a woman described how emergency responders delayed a convoy so she did not have an extended drive with a crying infant.

> *A couple of minutes before we left my baby woke up wanting a feed. So the men who were driving with us delayed the whole convoy so that I could feed my baby so he would be happy on the one and a half hour trip.*
> (Interview participant)

Parents repeatedly expressed gratitude for assistance they received from emergency responders. When survey participants were asked what they would do differently if they were in another emergency, by far the most common response was first, pack an evacuation kit and second, leave earlier.

Post-disaster recovery

Challenges for parents continued into the recovery phase. Emergency responders recognised that the busyness of recovery could make it very difficult for parents to be responsive to their children. One emergency responder noted that:

> *The services that present to you after that initial emergency is so overwhelming, and the phone ringing and the demands on you, that it's almost impossible to function and care for yourself, your children.*
> (Interview participant)

This experience was reflected in what some parents described. One mother shared:

> *We both got a lot more reactive with the kids, and it took a lot less to get either of us yelling. (We) had been really, really calm parents before then … we just didn't have the headspace.*
> (Interview participant)

Emergency responders stated that anything that lightened parents' (particularly mothers') load would help children. Case management and practical support like providing prepared meals were mentioned as interventions that could assist parents to have the time and headspace to meet their children's physical and emotional needs.

However, infants and young children were largely invisible in recovery programming with most child-focused interventions targeted at school-aged or at the very youngest, preschool-aged children. Yet, early childhood educators reported what they saw as adverse effects for children who had been infants or very young toddlers at the time of the bushfires. Three years later, these children were displaying behaviour they described as, 'beyond our capacity to deal with… we've never had to deal with this before'.

One mother in a town where services were severely disrupted, said that she would have liked to have a place where she could meet with other mothers in her community following the bushfires.

> *…somewhere you could go sit when those days were long … sat at the Surf Club with other mums with something, a distraction, to sit in something other than the 4 walls of your house… more of a mental health thing. Just something to distract you from what you dealt with.*
> (Interview participant)

Discussion

The BiBS Study is, to the knowledge of the authors, the first research in any high-income country to focus on the breadth of experiences of caregivers of infants and young children during and after a disaster. The study confirmed that gaps in Australian emergency response adversely affect children and their parents and other caregivers during the bushfires and provides knowledge to improve practice.

It was identified that caring for an infant or young child made preparedness and evacuation more complex and difficult. However, existing emergency preparedness activities considering children tend to focus on those of school age (Newnham et al. 2023). This lack of emergency preparedness communications and resources for parents with very young children compromises parent's ability to plan for an emergency and to evacuate in a timely manner with necessary supplies.

Although evacuation centres are purposed as a refuge from danger, for many parents, particularly mothers, they were a challenging and sometimes hazardous environment. Given the child safety and protection risks identified, there is a duty of care to improve support to those with infants and young children in evacuation centres. As suggested by parents and emergency responder participants, providing a separated, supported space in evacuation centres for families with very young children should be considered

and implemented where possible. Evacuation centres in Alberta, Canada, provide such support and could inform design of a similar model in Australia. Ideally, such support would be provided in a room separate from the main evacuation space. However, this may not always be feasible and, in such instances, a corner of a larger room may be reserved for this purpose. It is worth noting that this type of intervention is different from a child-friendly space as child-friendly spaces support children directly and are predominantly for children aged 3 years of age and older (Davie et al. 2014).

The invisibility of infants and young children in recovery programming is extremely concerning. For the very youngest children, it is often not the disaster that affects them adversely, but the effects of the disaster on the caregiving capacity of their parents. The BiBS Study and other research (Drolet 2021) shows that parents can struggle to meet the emotional needs of their children during and after emergencies. For infants and young children, having primary caregivers who are consistently unable to identify and/or meet their needs is a type of relational trauma that can alter their long-term development in a profoundly negative way (Schore 2017). Behavioural reports by the early childhood educators in this study suggest this may have occurred for some children who were infants at the time of the 2019–20 bushfires.

Recovery interventions supporting infants and young children are fundamentally different from those for older children or adults as support cannot be delivered directly to them but must be via their caregivers. A scoping review on psychosocial support programs for children following disasters by Gibbs et al. (2021) did not find any interventions targeted at preschool-aged children, including infants. However, there is a long history of supporting mothers in order to support children in humanitarian emergencies via an intervention called the Mother-Baby Area (MBA) (also called Baby Tents or Baby Friendly Spaces) (Hargest-Slade and Gribble 2015). MBAs provide a safe and comfortable space for mothers where they can meet with other mothers and their children and receive infant feeding, health care, parenting and psychological support. MBAs can reduce maternal suffering, increase perceived social support, assist in overcoming breastfeeding difficulties and improve the quality of interactions and the relationship between mothers and their children (Dozio et al. 2020). Where mothers are able to provide responsive care during emergencies this can protect their very young children from developing post-traumatic stress responses (Feldman and Vengrober 2011). MBAs have not been widely deployed outside of humanitarian contexts. However, what was, in essence, an MBA for breastfeeding women was established for a short time in an empty hospital ward after the Christchurch earthquake in 2011 (Hargest-Slade and Gribble 2015). In addition, the Australian Childhood Foundation instigated an MBA-like program called ChildSpace in Corryong, Victoria, after the 2019–20 bushfires. Other Australian research supports the desirability of recovery interventions that bring new mothers together (Hine et al. 2023; Davis et al. 2024). Resources for supporting infants and young children in humanitarian emergencies (e.g. Solon et al. 2020; Save the Children et al. 2020) may assist in improving support in Australia.

The vulnerability of women as the primary caregivers of infants and very young children must be recognised. This sex difference is not a result of gendered expectations but a function of women's reproductive work in gestating, birthing and breastfeeding (Gribble et al. 2023). Mothers' infant and young child caregiving work needs to be considered and adjustments made to ensure that women's needs are accounted for during and after emergencies. For example, mothers may find it more difficult to ask for assistance, access support or attend community consultation meetings because they are caring for their children and require proactive support and engagement.

The ABA Bushfire Project has developed and is developing resources for parents and emergency responders based on the findings of the BiBS Study. These resources include a free, short, e-module training for emergency responders on supporting families with very young children in emergencies; an infant- and toddler-specific emergency preparedness guide and evacuation kit lists; infant feeding in emergencies and safer infant sleep in evacuation fact sheets; preparedness information for pregnant women; evacuation centre signage (e.g. 'do not wash bottles here' for restrooms); child-safety checklists; evacuation centre training scenarios; social media templates with messages specific to parents; model policies for managing donations and distributions of infant formula in emergencies and an MBA for Australia Guide. Resources are and will be available on the ABA website (ABA 2023). The findings of this study are informing the ABA Bushfire Project activities and advocacy to improve emergency planning and response for infants and young children and their parents and other caregivers in emergencies.

In 2023, Eurobodalla Shire Council and the NSW State Emergency Service (SES) commenced a program for parents of preschool aged children called Playdates with Emergency Services. Gatherings were held in local parks in the late afternoon including a sausage sizzle. The playdates events were attended by local emergency organisations including the NSW Rural Fire Service, Marine Rescue NSW, NSW Ambulance, NSW SES, NSW Police, Australian Red Cross and the ABA Bushfire Project team. The playdates had the dual purpose of assisting young children to feel comfortable around emergency services personnel and educating and supporting parents about planning and preparing for emergencies.

The project developed free e-module training for emergency responders for families with infants and young children.

Strengths, limitations and future research

A strength of this study is that it triangulated data using multiple methods and included study participants from multiple locations with experiences as both caregivers of infants and young children and diverse emergency responder roles. The study has limitations in that parent views and experiences were from only a single emergency type and fathers were very underrepresented. It is unknown how representative caregiver study participants are of those affected by the 2019–20 bushfires. It is a further limitation that the effects of the emergency on children were not formally assessed nor measured. Future research should consider experiences in other emergency types and assess the effects of disasters on the development of children who were in utero or were infants or very young children at the time the emergency. The implementation and benefits of separate spaces for families with infants and young children in evacuation centres and of MBAs should be a subject of future research.

Playdates help children feel comfortable around emergency services personnel and educate parents about being prepared.

Conclusion

This study exposed the challenges faced by the parents and other caregivers of infants and young children during the 2019–20 bushfires. The study confirmed the need for government and non-government organisations to improve preparedness, response and recovery support. Existing emergency planning needs to be reviewed with infants and young children in mind to identify changes that should be made at the national, state/territory and local government levels. Targeted support in preparedness (tailored information), response (separate spaces in evacuation centres) and recovery (MBAs) should be implemented. Existing guidelines should add content related to protecting and supporting infants and young children in emergencies. Resources that have been developed for the humanitarian context can be drawn from to improve guidelines, preparedness and response planning to better support the needs of infants and young children in Australian emergencies.

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Abstract

The effects of emergencies and disasters pose greater challenges for people within culturally and linguistically diverse (CALD) communities. Several barriers can prevent people in CALD communities from adequately preparing for such events and this contributes to an increased vulnerability. Queensland experiences heightened natural hazard risks, therefore it is crucial to ensure that preparedness information is accessible and relevant to all communities, including CALD communities. This paper describes a qualitative study that examined the emergency and disaster preparedness information needs of people in CALD communities in Queensland. The aim was to identify better ways of delivering preparedness initiatives through tailored engagement approaches. Three focus groups were conducted with 16 CALD community leaders from the Gold Coast, Logan and Ipswich local government areas. The data gathered showed that CALD communities in these areas possessed low levels of awareness of emergencies and disasters and low levels of preparedness for such events. This study highlights the need for tailored and strengths-based engagement approaches. Disseminating information in suitable formats through preferred communication channels and partnering with trusted sources, including community leaders and places of worship, were found to be effective ways to engaging CALD communities in disaster preparedness.

Tailoring emergency and disaster preparedness engagement approaches for culturally and linguistically diverse communities

Peer reviewed

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SUBMITTED
4 January 2024

ACCEPTED
24 April 2024

DOI
www.doi.org/10.47389/39.3.42

Introduction

Research has shown that a community's vulnerability to the effects of high-risk hazards is influenced by a range of complex and interconnected factors (Bolin and Bolton 1986; Ogie et al. 2018). For example, Bolin and Bolton (1986) identified ethnicity as a determinant of vulnerability and highlighted that the interplay of ethnicity and social inequalities, such as race and class, resulted in poor recovery outcomes. Language barriers, limited social networks, a lack of local risk knowledge (Marlowe et al. 2018), power imbalances (Bolin and Kurtz 2018) and limited access to information and resources (Chandonnet 2021) are understood to be major barriers for people in CALD communities. The vulnerability discourse around disaster preparedness for marginalised communities has existed for decades and continues to emphasise the importance of understanding the social and cultural dimensions of disasters to strengthen disaster resilience (Bolin and Kurtz 2018).

Research in New Zealand and Japan found that linguistic minorities confront unique hazard vulnerability, partly due to linguicism, which is described as 'language-based discrimination at multiple levels' (Uekusa 2019, p.353). For example, during the 2011 Japan earthquake and tsunami, the New Zealand 2010 Canterbury earthquake and the 2011 Christchurch earthquake, disaster warnings and announcements were made available only in the dominant languages (Uekusa 2019). During the 2014 Washington wildfires, Hispanic farmworkers did not receive evacuation notices due to language barriers, and the single Spanish radio station in the region did not receive emergency information to broadcast an

interpreted warning (Davies et al. 2018). Due to a lack of translated messages in the 2011 Queensland floods, many people in CALD communities underestimated their risks and failed to heed warnings or take appropriate actions (Shepherd and van Vuuren 2014). During the Great East Japan earthquake and tsunami in 2011, a small group of Thai women were living in a heavily affected area. Japanese people living in this region had been trained in tsunami-evacuation drills, however, the group of marginalised Thai women were disadvantaged having been excluded from such drills (Pongponrat and Ishii 2018). CALD communities in Australia have difficulty accessing resources that are culturally appropriate and accessible regarding COVID-19 and turned to international news streamed from their country of origin, which did not reflect the situation nor health advice relevant to Australia (Seale et al. 2022).

In a study conducted by the Australian Red Cross, Chandonnet (2021) examined the complex factors that shape the resilience and vulnerability of CALD communities and observed that although CALD communities remain highly vulnerable, 'many migrants and refugees display high levels of resilience, knowledge and coping capacities' as a result of overcoming the significant challenges of migration and settlement (Chandonnet 2021, p.5). Previous studies have also acknowledged that capabilities and vulnerabilities exist simultaneously in communities, and although these capabilities do not cancel out vulnerabilities, recognising and building upon them can lead to positive outcomes (Ikeda and Garces-Ozanne 2019; MacDonald et al. 2023). The *Sendai Framework for Disaster Risk Reduction 2015-2030* (UNDRR 2015) recognises that migrants contribute

A study by the Australian Red Cross found that people in CALD communities remain highly vulnerable to the complexities of disaster events.

Image: Australian Red Cross

their knowledge and skills through their resilience in ways that can contribute to the 'design and implementation of disaster risk reduction' (p.23).

This study sought to increase engagement of CALD communities and understand their needs in relation to preparing for emergency and disaster events and work towards the principle of the Sendai Framework of 'disaster risk reduction requires an all-of-society engagement and partnership' (UNDRR 2015, p.13).

Queensland is particularly susceptible to hazard events and has experienced more than 97 significant disasters since 2011 (Queensland Reconstruction Authority 2022) including bushfires, storms, floods and cyclones. The effects of these events have complex and long-term consequences on the community, environment, infrastructure and economy, However, CALD communities are disproportionately affected due to the exacerbation of existing vulnerabilities (Ogie et al. 2018). According to the *Special Report: Update to the economic costs of natural disasters in Australia* (Deloitte 2021), South East Queensland is expected to face the greatest increase in costs from disasters due to climate change and predicted population growth. This highlights the need for greater action to strengthen resilience in these communities. It is vital that all residents understand their local risks and take steps to prepare. However, disaster preparedness information is rarely tailored to meet the specific needs of CALD communities. This paper explores the needs of people in CALD communities to strengthen their resilience in the face of disasters.

The 2021 Australian Census results showed that more than one in 10 people in Queensland speak a language other than English at home and 22.7% of Queensland's population were born overseas. This is an increase from 21.6% in 2016 and 20.5% in 2011 (Australian Bureau of Statistics 2021). With cultural diversity increasing, the need for tailored preparedness community engagement approaches is evident.

This study explored the emergency and disaster information needs of CALD communities in South East Queensland. It concentrated on the preparedness phase of emergency management due to its ability to influence positive outcomes in response and recovery phases (Teo et al. 2018). The research sought to understand the attitudes of people in CALD communities towards emergency and disaster preparedness, the enablers and barriers to accessing and understanding preparedness information and how preparedness engagement approaches can be tailored to meet the needs of CALD communities.

Methodology

This study was part of a master's research project based on a workplace problem. A qualitative exploratory approach was used to draw on the strengths of CALD community

members and gain a broader understanding of their needs to address preparedness for events. The researcher is employed within a government agency responsible for the dissemination of disaster preparedness information and sought to challenge the top-down approach of information sharing by seeking the voices and experiences of the community and identify ways to ensure information is not distributed inequitably (Howard et al. 2017). CALD community leaders were recruited to participate in 3 focus groups within the local government areas of the Gold Coast, Logan and Ipswich in South East Queensland. Due to the work-based nature of the project, it was necessary for data collection to be conducted within the researcher's work area of South East Queensland and these locations were selected due to their rich diversity profiles. Community leaders were selected for the study due to their ability to share their own experiences and provide valuable insights from the perspective of their community.

A convenience sampling method was applied to recruit participants from multicultural organisations within the 3 local government areas. The researcher used existing relationships with people in multicultural organisations who assisted with the recruitment process by identifying eligible participants, sharing the research invitation and advising of culturally sensitive considerations. A total of 16 community leaders participated in the focus groups. These participants represented Kenyan, Tongan, Burmese, Qatari, Sudanese, Samoan, Nigerian, South Sudanese, Chinese and Indian communities.

Focus groups were selected as the data collection method for their ability to generate rich qualitative data regarding participants' opinions and experiences. The researcher facilitated focus groups at community facilities and followed a predetermined question path to guide discussions and enhance uniformity of data across focus group locations. Time was allocated at the beginning of each focus group to provide an overview of the research and clarify word terms that may have different meaning across different cultures.

Focus group discussions were audio recorded and transcribed verbatim. Focus group participants were advised that they could request a summary of the transcript, however, none of the participants required it. Identifiable data was removed from the transcripts and participant names were replaced with unique codes. The data was analysed using the Braun and Clarke (2006) 6-phase method of thematic analysis to identify themes. This involved examining the data, generating initial codes, searching for themes, reviewing, defining and naming themes and writing the report. The research supervisors reviewed the process and assisted with defining themes.

The research was approved by the University of Southern Queensland Human Research Ethics Committee (H21REA273).

Findings

Low levels of awareness and preparedness

Data collection took place within 5 to 9 months after the South East Queensland rainfall and flooding event of February and March 2022. This event significantly affected the research locality and some participants were able to reflect on their experience during this event and other disasters when describing their community's levels of awareness and preparedness.

Participants indicated that CALD communities possess low levels of awareness of their local risks and that they lack knowledge of how to respond appropriately during an emergency or disaster. This can lead to confusion and inaction. Examples included being unaware of where to get sandbags, how to find information, the roles of emergency services organisations, when it is appropriate to call triple zero and how to respond to official warnings. One participant reflected on a bushfire incident, saying that his community was panicked and unprepared when they received a bushfire warning instructing residents to prepare to leave:

> *And all of a sudden people in that street (had) gotten a message to get ready for evacuation and it was like a shock for everyone that we were evacuating … we don't live somewhere where there are lots of bushes … they didn't know what to do.*
> (FG3.1)

Participants reported that CALD communities are not adequately prepared for a potential emergency or disaster. One participant described being caught off guard by the South East Queensland 2022 floods and was not prepared:

> *Oh, I live in an apartment and nothing was going to happen to me, but even the balconies flooded … For me, it always seemed like a distant thing and I think that's the same with a lot of people. It happens, but it happens around me. So, am I prepared? … No, I'm not prepared at all … I don't think anyone's prepared, and I don't think anyone actually knows anything about it.*
> (FG1.2)

Low levels of awareness and preparedness in CALD communities were attributed to various factors. Some participants described their communities as passive receivers of emergency and disaster information, meaning that community members are unlikely to proactively seek out information and instead rely on emergency services personnel and community leaders to deliver important information directly to them. One participant explained that emergency services agencies had not 'sat down' with their community to discuss the issue, resulting in a lack of community action:

So far nothing has been done. First of all, because nobody has come and approached us, sat with us, held a seminar at the mosque.
(FG1.4)

Others believed that God would protect them in a disaster and this negated the need to prepare or seek information. Limited proficiency in English and optimism bias were considered by participants to be factors that hindered awareness and preparedness efforts, as outlined in this response:

There is enough information, enough means of obtaining information. But if the attitude is 'well, that's not gonna happen to me. My family and I don't need to know these things'; unless that changes, we're not going to be able to filter information down to everyone.
(FG3.3)

People's previous experiences with emergencies and disasters in other countries were also linked to low levels of awareness and preparedness. In some cases, participants indicated that disasters were more prevalent in their country of origin in comparison to Australia. In other cases, the concept of preparedness was unfamiliar because it was not promoted in other countries.

Communication channels and information formats

Participants indicated the importance of using suitable communication channels and information formats to disseminate information effectively. They described the well-established communication methods and networks that already exist within CALD communities and recommended the use of free group messaging platforms such as WhatsApp, Viber and WeChat to reach the community with important information.

Social media, especially Facebook, was also considered a suitable communication channel, particularly for younger community members. Participants noted that their communities were more likely to take notice of information published on their community Facebook groups than on government Facebook pages:

We have Viber Group, Facebook Group … if something happens, or something is going to happen, whether it be about weather or COVID…we try to send it to the group so that everyone can see it in our mother tongue.
(FG2.2)

In addition to social media platforms, face-to-face opportunities were deemed valuable, including information displays at community events or social gatherings, demonstrations by emergency services personnel and regular information sessions held in places of worship or common meeting places. Significantly, all participants agreed that the most appropriate communication channel for emergency and disaster information was by word-of-mouth through community leaders and places of worship. The importance of emergency management agencies working together with community and religious leaders to deliver information was emphasised:

It's very important for your presence, to come and do a presentation. We can talk to you, but they like to see you there as well … We can emphasise later, but you have to put in the key point and then after you guys have left, we'll follow it up.
(FG1.4)

Information presented in visual formats, such as picture-based resources and videos, were preferred as they can overcome language barriers and be easily shared through group messaging and social media platforms. Participants reflected on their experiences during the COVID-19 pandemic where videos of community leaders presenting health messages in their language were well-received by their communities.

Several communication channels and information formats including newspapers, radio and television, were reported as unsuitable for CALD communities. This indicates that information disseminated in these ways create barriers to accessing and understanding preparedness information. SBS and ethnic radio stations were, however, considered appropriate as information is broadcast in many languages.

Government websites and information delivered through government facilities were considered to be less-effective platforms for CALD communities. Participants indicated that their communities are unlikely to approach government sources for information due to language and cultural barriers.

Emergency management organisations frequently produce emergency and disaster preparedness information in printed formats, such as brochures and factsheets translated into a range of community languages. Participants reported that print materials are less suitable for people in CALD communities due to low literacy levels, a preference for other formats and limitations associated with translation. For example, participants stated:

Even if you give them a language translated thing, they might not even be able to read that.
(FG1.3)

If you say, 'oh my god, the tsunami is coming'. Like, what is tsunami? … We don't have that word.
(FG1.1)

Additionally, slang terms used in Australia should be avoided and the use of plain English is preferred to incorporate visual aids for better understanding. For example, the popular tagline 'If it's flooded, forget it', was discussed and participants highlighted the importance of using plain English:

Just say 'don't drive'. Simple English, which everyone can read and understand … we have to spend time trying to figure it out and by the time we figure it out, we might be drowning.
(FG2.2)

Community leaders and places of worship

Participants consistently recognised community leaders as trusted and respected individuals who speak the language and can deliver critical information to their communities. They described community leaders' roles in connecting with their communities, conveying information and acting as intermediaries with service providers. Working with community leaders was seen as a vital step to ensure that preparedness information was received, understood and acted on. For these reasons, participants explained that community leaders are the preferred messengers for important safety information:

The leaders can speak the language; leaders can even contact service providers … the best way is (to) go through community leaders … they can take you directly to the community, or you deliver them the information and they deliver it to the community.
(FG3.5)

They don't tend to accept what the authority says, or what they hear from the radio. They don't give a damn about (that), they only listen to their leader.
(FG1.4)

While participants indicated an eagerness to support emergency and disaster preparedness in their communities, they also expressed concerns about the level of responsibility community leaders carry and the need for support from government. Participants stressed the importance of educating and training community leaders, ongoing partnerships between disaster management agencies, 2-way communication and funding to deliver grassroots community initiatives.

Places of worship were widely considered to be the most appropriate locations for CALD communities to receive preparedness information. Participants noted that places of worship are common meeting places for the community, where they hear from their trusted religious leaders and where they can speak their own language, making it a significant setting for information dissemination:

Most of my community here don't speak English very well … so we do encourage them just to get the information through the church where they can relay a message from one to another.
(FG2.3)

One participant emphasised the importance of taking information to where the community already gathers:

It's probably best to take the information to where they are, then they will probably take it seriously.
(FG1.2)

Discussion

This study revealed that the CALD communities represented by participants possess low levels of awareness of emergencies and disasters and low levels of preparedness for such events. This relates to multiple factors, including a lack of knowledge of emergency and disaster concepts, low English language proficiency, optimism bias, religious beliefs, reliance on others to provide critical information, previous experiences and cultural influences. This is consistent with findings of previous research that found that CALD communities were not well informed about disasters and lacked adequate preparedness, which contributed to higher levels of vulnerability to hazards (Ikeda and Garces-Ozanne 2019; Marlowe et al. 2018; Uekusa 2019).

Some of the barriers that prevent people in CALD communities from accessing and understanding preparedness information have been identified. Unsuitable communication channels and information formats that are commonly applied by government agencies were found to be ineffective. Information published on government websites, available at government facilities, broadcast through mainstream media or disseminated in printed formats may be effective for a generalised public but have been found to be unsuitable for people in CALD communities.

Translated materials may be useful for some communities; however, should not be solely relied on to inform CALD communities as materials are not translated into every language and there is a risk of emerging CALD communities missing out on critical information (Chandonnet 2021; Seale et al. 2022). In addition, translated print materials are ineffective for CALD community members who have low literacy in their spoken language or who rely on verbal communication (Chandonnet 2021).

This study identified enabling factors and revealed strengths embedded in CALD communities in Queensland. Communication strengths became apparent when analysing participant descriptions of existing methods used by community leaders to share information with their networks, particularly group messaging and social media platforms. These findings support other studies (Seale et al. 2022; Chandonnet 2021) who observed a shift towards smart phone platform preferences. In addition, participants indicated that face-to-face opportunities and information published in plain English and in visual formats were effective methods of communicating. Incorporating these channels into preparedness efforts can enhance tailored engagement approaches. Preferences

can depend on factors such as English proficiency, literacy levels, age, technology skills, cultural background, type of hazard and phase of disaster management (Chandonnet 2021). Therefore, when developing tailored engagement approaches, it is important for emergency management agencies to understand the local community (Ogie et al. 2018; Wild et al. 2021) and deliver a multi-pronged approach (Chandonnet 2021).

Another unique strength evident in CALD communities is the trusted role of community leaders. Participants indicated that engaging community leaders is critical to share information with CALD communities in a way that is easy to access and understand. It is important to acknowledge that community leaders, being participants themselves, may view these matters through the lens of their community roles and power structures. However, this finding is consistent with research regarding the role that CALD community leaders played during the COVID-19 pandemic to connect CALD communities with vital health information (Wild et al. 2021; Seale et al. 2022). Findings demonstrated that the approaches applied to the COVID-19 pandemic could be replicated in the context of other emergencies and disasters.

Places of worship were found to be a significant strength of CALD communities represented in this study and an important enabling factor for disseminating disaster preparedness information. Places of worship have a long history of supporting local communities during times of crisis when they are often relied on to provide urgent relief including food, shelter, clothing and emotional support (Sheikhi et al. 2021) and communities have indicated that places of worship would be one of the first places they would seek assistance in an emergency (Chandonnet 2021; Sheikhi et al. 2021). Participants explained that their places of worship served as a hub where the community can gather, connect, worship, learn and socialise while also receiving guidance from their leaders in their own language. Information provided during services can be shared by attendees to other families and community members, thereby extending the reach to those that may not attend places of worship. Findings indicate that there is enormous potential for places of worship to play a significant role in supporting communities across all phases of disaster management, including the preparedness phase and should be considered by emergency management agencies as suitable mechanisms to reach CALD communities.

Through understanding and harnessing these strengths, emergency management agencies can improve engagement approaches by ensuring that preparedness information can be easily accessed, understood, shared and acted on.

Limitations

This study was limited to 3 local government areas in South East Queensland and the participants were community leaders. The representation of nationalities was indicative of the local communities. Further studies could be expanded across Queensland for increased community perspectives. It is acknowledged that the participant group was predominately community leaders. This was due to the difficulty in recruiting participants from the general community who had the language skills and confidence or willingness to participate in focus groups. Due to resource constraints, interpreters were not present, therefore, only people with a level of English similar to the Level 5 International English Language Testing System band were recruited to participate in the study. This meant participants had the necessary English language proficiency to clearly understand the consent process and participate in discussions.

Conclusion

While traditional communication methods are often suitable for reaching the public, they can create barriers for CALD communities. This highlights the inadequacy of a one-size-fits-all approach that fails to acknowledge the language and cultural needs of people in CALD communities. Failing to overcome these barriers has detrimental consequences for CALD communities that have been unable to access the critical information needed to keep members and families safe in an emergency.

This study demonstrated that tailored engagement approaches that harness the inherent strengths of CALD communities might deliver successful preparedness initiatives to build resilience and reduce vulnerabilities. Therefore, tailored community engagement materials and pathways should consider the specific information needs and communication preferences of CALD communities. This challenges the existing power structures and inequalities that occur in society that perpetuate vulnerability. In doing so, it is important for emergency management agencies to form connections with trusted sources, such as community leaders, multicultural organisations and places of worship to exchange knowledge, build trust and share information. Collaborating with these trusted sources will enable agencies to understand the unique characteristics, strengths and vulnerabilities of local communities. Developing a partnership approach should also include suitable training, guidance and resources for community leaders involved in preparedness initiatives.

It is strongly recommended that emergency management agencies develop a strategy to formalise collaboration with CALD communities if they have not already done so. Working together to develop tailored communication and prioritising initiatives will contribute to better preparedness and reduce the harmful effects of emergencies and disasters.

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Migrant and refugee communities strengthening disaster resilience

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SUBMITTED
1 March 2024

ACCEPTED
10 May 2024

DOI
www.doi.org/10.47389/39.3.49

Abstract

This paper presents insights from a community-led initiative in South Australia aimed at enhancing disaster resilience in culturally and linguistically diverse (CALD) migrant and refugee communities. Anchored in the principles of community cohesion, empowerment and informed action, the project addresses socio-cultural dynamics and communication barriers. A series of workshops and forums, tailored to account for cultural sensitivity, showed strengthened community collaboration, skills development and increased awareness of the psychosocial effects of disasters, prompting proactive strategies that consider the unique vulnerabilities and strengths of CALD communities. Participant testimonials noted increased community spirit and practical application of acquired knowledge, including understanding local hazard risk profiles and trust-building with emergency services organisations. The findings demonstrate the importance of mitigating access challenges, integrating diverse community perspectives into resilience-building activities and ensuring the inclusivity of management policies. Highlighting the significance of strengths-based community-driven approaches in emergency and disaster management, particularly for marginalised groups, this initiative found that engaging communities as active contributors enables more resilient and self-efficacious populations that effectively bridge cultural and linguistic gaps in preparedness.

Introduction

Working with communities in the planning and implementation of community-focused projects is critical for effectiveness and sustainability (Ife 2016). This engagement becomes especially important when working with migrant and refugee communities, given their unique experiences and perspectives, which may include exposure to disasters and conflict, different cultural norms, communication styles and family structures as well as varying migration status (Crawford et al. 2021). As Hansen et al. (2013) note, with over a quarter of Australia's population born overseas (Australian Bureau of Statistics 2023), the nation's multicultural society is home to people from a plethora of cultural and linguistic backgrounds. As emergency preparedness messaging is commonly targeted at the majority English-speaking (able-bodied, adult) population, ensuring that everyone is adequately prepared has challenges, noting that other groups that do not fit within a normative persona are 'marginalised' (for example, see Bhopal 2018). This paper discusses the results, lessons learnt and recommendations from a project facilitated by the Australian Red Cross aimed at improving risk reduction and resilience in CALD communities in suburban areas of Adelaide/Tarndanya in South Australia.

In this paper, 'community' refers to both geographical and CALD communities (Ife 2016). Geographical communities are defined by specific physical regions, such as neighbourhoods or towns. CALD communities within these geographical areas consist of individuals from varied cultural and linguistic backgrounds, including migrants and refugees, who have unique needs, strengths and perspectives. This dual definition highlights the importance of tailoring preparedness and response to address both the locale and its cultural diversity to allow for inclusive community engagement.

For clarity, 'resilience' refers to the capacity of individuals and communities to anticipate, prepare for, respond to, recover from and adapt to adverse events, particularly disasters (Paton and Johnston 2001). This encompasses the ability to withstand and recover from such events as well as the capability to learn from them and strengthen future preparedness. Resilience involves a combination of factors, including knowledge, security, wellbeing and community connection that collectively enhance the ability to manage and mitigate the effects of disasters (Newnham et al. 2023; Richardson 2014). Specifically, this paper emphasises the importance of integrating CALD perspectives into resilience-building efforts so that community members are equipped and empowered to navigate and overcome crises.

Disaster resilience varies between and within communities and hinges on factors like socio-cultural backgrounds, language proficiency and previous exposure to similar situations (Richardson 2014). CALD communities can sometimes find themselves at a disadvantage in these scenarios due to linguistic barriers, lack of knowledge about local emergency protocols, lack of local connections, cultural nuances that might affect their approach to crises, potential distrust of uniformed personnel and lack of service commitment to understanding and using these communities' strengths (Chandonnet 2021; Teo et al. 2019).

Recognising this gap, the CALD Community Locally-Led Disasters and Risk Reduction Project was initiated by the Australian Red Cross in South Australia. The project was a dedicated effort to connect emergency management strategies that focus on the majority population and the needs of CALD migrant and refugee communities. Rooted in principles of inclusivity, collaboration and empowerment, the initiative used a multi-faceted and strengths-based approach to address gaps by connecting people within CALD communities to emergency services agencies, civil society organisations and local councils. This approach introduces the resilience, skills, knowledge and experiences of people within CALD communities that can inform local emergency management and disaster risk reduction planning (Chandonnet 2021).

Red Cross approaches disaster resilience from a psychosocial angle that considers the psychological and social actions people can take to prepare themselves in addition to the more common focus on practical actions to survive the event (Richardson et al. 2023). While gaining traction, psychosocial elements of preparedness and recovery are often ignored in mainstream emergency management discussions that focus on rebuild and clean up (Richardson et al. 2023). The psychosocial element is particularly under-explored in relation to CALD communities (Mercer et al. 2012). Further, much of the research on CALD groups and emergency management has centred on barriers and challenges rather than harnessing strengths and gathering potential solutions to barriers from these communities (Chandonnet 2021). Research on this topic outlines service gaps such as language barriers, cultural insensitivity, unfamiliarity with risk profiles, inaccessible information dissemination, lack of representation and trust deficits (Hansen et al. 2013; Marlowe et al. 2022). Many of these concerns were raised during this project. However, respondents accompanied explanation of these challenges with their recommendations about how emergency management organisations can and should proactively respond and address issues.

Noting the dearth of literature examining practical application of psychosocial disaster resilience for CALD communities, this article discusses the aims, methodologies and outcomes of this project, presenting insights and implications that could inspire similar initiatives worldwide. The lessons from this Australian project reinforce the importance of community-based approaches emphasising inclusivity.

Aim

This project had clear objectives. The primary goal was to understand and address the specific strengths, needs, and challenges faced by CALD communities in the context of disaster management and resilience-building and support practical community-led preparedness actions. The project drew from the organisation's broader monitoring and evaluation framework, which helped determine relevant outcomes and indicators (Kelly et al. 2022a). Consistent with the community development approach, these outcomes refer to ways of working. For example, an outcome is that communities are driving their own agenda. Therefore, the role of Red Cross is to support communities to achieve their own aims. As part of this approach, an early workshop focused on communities defining their own intended outcomes for the project.

Literature review

Psychosocial preparedness

Disasters can deeply affect the lives of individuals and communities causing injury, loss of life and destruction of property. Beyond these immediate effects, disasters disrupt social networks, employment, education and places of personal and communal significance that undermines people's sense of security and interrupts their goals and aspirations. Recognising the breadth of these effects underscores the importance of psychosocial preparedness—preparing individuals and communities psychologically and socially to withstand and recover from such events (Richardson et al. 2023).

Pre-emptive actions that strengthen resilience can mitigate the adverse psychosocial effects of disasters and

improve recovery outcomes (Randrianarisoa et al. 2021; Morrisey and Reser 2003). Such preparedness involves developing knowledge and capacities among governments, organisations and individuals to anticipate, respond to and recover from disasters (UNDRR 2020). As traditional preparedness and resilience programs have focused on surviving the initial aftermath of a disaster, they often overlook the longer-term psychosocial, financial and physical repercussions on affected populations (Gowan et al. 2015).

'Psychosocial' describes the interconnections between an individual's psychological aspects—like emotions, thoughts and reactions—and their social environment, including relationships, cultural values and community ties (IFRC 2014). As such, psychosocial preparedness involves preparing for disasters through psychological and social measures. This includes understanding threats, enhancing self and communal care skills and building social networks.

The framework of psychosocial support detailed by Hobfoll et al. (2007) highlights 5 pillars of safety, calm, self-efficacy, social connection and hope. These pillars can guide preparedness actions that enhance the wellbeing of individuals, enabling them to feel secure, connected, capable and hopeful about recovery. This approach aligns with the Red Cross broader concept of psychosocial preparedness, which extends beyond individual psychological readiness to include building social capital through community relationships and connections (Richardson et al. 2023).

The Red Cross uses Putnam's (2000) 3 types of social capital: bonding (horizontal intra-communal), bridging (horizontal inter-communal) and linking (vertical between communities and institutions/authorities). For example, developing personal support networks and deepening connections with neighbours are resilience-building activities that leverage bonding social capital, enabling emotional and physical support that has demonstrated benefits to recovery (Aldrich and Meyer 2015; Nagakawa and Shaw 2004). Understanding the risk posed by potential hazards and planning for business and income disruption use bridging and linking capitals by connecting individuals with community resources and institutional support, respectively (Every et al. 2019; Ulubasoglu and Beaini 2019).

Programmatic actions range from facilitated strengths-based community sessions to helping establish community-led working groups. Programs and projects educating around psychosocial preparedness include awareness raising around local risk profiles, connecting with emergency services, undertaking localised risk reduction initiatives, planning, practicing calming strategies and learning about the psychosocial effects of disasters. Each action reduces the disaster's effects. This holistic approach, recognising the intertwining of psychological and social dimensions, positions psychosocial preparedness as an integral aspect of disaster readiness and recovery.

CALD communities and disasters

Recent scholarship reaffirms decades of research that shows the disproportionate effects disasters have on marginalised groups, which includes CALD communities and amplifies existing inequalities and oppression (Marlowe et al. 2022). Vulnerability and risk extends beyond physical geography and structural factors such as poverty and unemployment to include diversity aspects like gender, age, education, language proficiency and duration of residency in a new country (Marlowe et al. 2022; Teo et al. 2019). This broader understanding is essential for effective and inclusive disaster resilience strategies.

Marlowe et al. (2022) observed that while migrant and refugee communities may possess strong internal bonds (bonding capital), they often lack connections with society and support organisations (bridging and linking capital), which are crucial during and after disasters (Aldrich and Meyer 2015). This observation is supported by Osman et al. (2012), who found similar challenges among refugee communities affected by the Canterbury earthquakes in New Zealand, highlighting their limited relationships with external agencies and the wider society.

Socio-cultural factors also play a role in the vulnerability of certain CALD subgroups to specific hazards, such as Australia's extreme heat. Hansen et al. (2013) pointed out that older migrants, new arrivals and migrants on low-incomes with limited English proficiency are particularly at risk. These vulnerabilities are compounded by socioeconomic disadvantages, linguistic barriers, poor housing quality and cultural differences. This leads to unmet needs in understanding and implementing harm minimisation strategies during disasters.

Engaging with migrants and refugees for disaster resilience

Effective engagement with CALD communities is imperative for inclusive disaster resilience, especially as previous research has demonstrated trust and rapport deficits between CALD groups and emergency management organisations (Ogie et al. 2018; Osman et al. 2012). A conceptual framework proposed by Marlowe et al. (2018, 2022) emphasised the essential elements of reach, relevance, receptiveness and the establishment of trust-based relationships to facilitate the uptake of messages within diverse communities, with sensitivity to cultural and linguistic nuances. This framework clarifies the connection between community characteristics, diversity and hazard risk contexts.

In their exploration of engagement strategies with resettled refugees, Marlowe et al. (2022) and Ogie et al. (2012) articulated the importance of recognising the distinct backgrounds and needs of refugee groups, establishing preferred modes of communication and building trust

through collaboration with credible entities. They affirm that engagement should be strengths-based and respect the everyday experiences of participants. This approach is foundational to tailor engagement efforts that resonate with the target communities' experiences and expectations (Howard et al. 2017) and has demonstrated efficacy in terms of increased preparedness (Chandonnet 2021).

Hansen et al. (2013) argued for equitable access to resources as a critical factor in climate change adaptation and the mitigation of health disparities linked to disasters. This includes access to culturally informed communication and education that is relevant and builds on cultural knowledge (McEntire et al. 2012; Pfefferbaum et al. 2018). To facilitate this, Hansen et al. (2013) proposed a multifaceted communication approach that includes bi-cultural community engagement and the use of multilingual media to cater to a diversity of cultures, languages and religions.

To bring these inclusivity-focused strategies into action, CALD considerations should be incorporated into state and territory and national disaster risk reduction and management policies, plans and procedures. Meaningful incorporation requires that emergency management personnel at all levels have a competent understanding of cultural diversity. Additionally, meaningful adoption necessitates a paradigm shift in perception—from viewing CALD communities as inherently vulnerable to recognising their potential as valuable assets in resilience-building (Cheung 2014; Chandonnet 2021).

Theoretical framework

The project was grounded in a theoretical framework that amalgamated 3 concepts: community engagement, disaster management and cultural competency. Each of these concepts supported project personnel to build on strengths and address the challenges faced by CALD communities.

Central to any initiative that aims to make a tangible difference at the grassroots level, community engagement is about involving the stakeholders – in this case, the CALD communities – in the decision-making, planning and execution processes (Crawford et al. 2021; Ife 2016). By fostering an environment where these communities felt heard, valued and empowered, the project facilitated relevant, effective and sustainable processes. Authentic engagement involved enabling an ongoing 2-way dialogue between the community and emergency services.

CALD communities can benefit from tailored emergency management planning that considers their linguistic needs, cultural belief, and prior experiences (Teo et al. 2019). By intertwining disaster management with the other elements of the framework, the project ensured that the protocols designed were theoretically sound, culturally sensitive and community-driven.

Cultural competency is the capability of institutions and individuals to recognise, understand and respect the diverse cultural factors that influence people's beliefs, values and practices. It is about avoiding generalisations or stereotypes and instead appreciating the nuances of different cultural groups and individuals. In the context of emergency management, cultural competency enabled programming that was efficient, empathetic, understanding and respectful of the distinct identities of participants.

Overview of the CALD Community Locally-Led Disasters and Risk Reduction Project

The rapidly changing demographic landscape in Australia, marked by an influx of people from various cultural and linguistic backgrounds, presents both opportunities and challenges for emergency management. Recognising the importance of integrating CALD communities into readiness plans and resilience-building, Red Cross took a psychosocial preparedness approach to its work with CALD communities in 3 South Australian communities on Kaurna Country in suburban Adelaide/Tarndanya. These communities were chosen due to their multicultural composition (with a mix of newly arrived and established CALD groups) and Red Cross's positive relationship with the local council. A local CALD community development worker was hired to work the community members and facilitate the sessions. Starting with desktop research to identify demographics and existing cultural groups and organisations, the worker then began talking with community leaders about what was required and to seek their input to develop the project. The first 3 months of the 18-month project was spent out in the community and talking with as many people as possible. This was vital for the project's development and to identify community leaders who were representative of the region's multicultural demographic and who were interested in being part of the project.

The project centred on the delivery of 9 disaster-preparedness workshops across the 3 communities, with 27 community leaders from multicultural backgrounds participating in each of the workshops relevant to them. The workshops combined the different communities, thus supporting bridging capital between various cultural groups. These workshops focused on topics such as localised hazard-risk mapping, identifying strengths and barriers, creating and implementing action plans and developing sustainability and governance mechanisms. These workshops were designed in conjunction with participants who identified local needs, interests and desired areas of focus. Participants had ethnic backgrounds from Ethiopia (Tigray), Cote d'Ivoire, South Sudan, Sri Lanka, Papua New Guinea, Afghanistan, Tanzania, Kenya, Pakistan, Mexico and Syria.

Community leaders represented multicultural organisations in workshops about risk identification and making action plans.
Image: Australian Red Cross

The project aimed to deepen connections with and between CALD communities and encourage them to adopt active roles in preparedness, noting their inherent strengths and resources. Acknowledging requests from CALD community leaders about the need for upskilling, the project provided tailored training sessions, workshops and resources. The goal was to equip community leaders with the knowledge and skills needed to help them and their communities effectively prepare, respond and recover from disasters.

Participating community leaders and Red Cross personnel noted the need to enhance social capital between each CALD community and other communities in their region as well as vertically between communities and government and civil society agencies. Thus, the project aspired to establish and strengthen collaborative networks between CALD communities, emergency services organisations, civil society organisations and local councils. Events like the community-led Multicultural Unity Week Family Sports Day helped facilitate this, serving as a platform for various stakeholders to interact, share insights and work collectively. Links were also forged through these agencies serving as guest facilitators, advisors and enablers through their provision of information, review of community-led outputs/activities and resourcing.

Ensuring that the voices of CALD community members were heard and acted on was a key part of the Red Cross approach. The project had mechanisms for consistent feedback from the community, thereby allowing for adaptations in strategies and interventions. As well as improving the project and providing information for other uses, feedback supported community empowerment and rapport.

Recognising the transient nature of many community initiatives, the project aimed for longevity. Participants committed to establish a governing council. Having this platform supports sustainability and members pledged to fulfill community-led and prioritised initiatives. While all members are volunteers, they intend to seek funding to finance initiatives and have stayed connected with Red Cross and their local council who provide them with links, resources and grant opportunities. By the end of the project, the communities and their governing council were leading their preparedness activities.

Methods

This study took a mixed-methods approach incorporating interviews, quantitative surveys and observation with participants and stakeholders such as local emergency services and council personnel. The interviews and surveys were administered by Red Cross personnel who had not been involved with the project. Surveys and interviews sought to gather information regarding how and whether participants had changed their level of understanding, feelings of control and empowerment and the degree of social connection during the project. Building on stakeholder self-reported feedback, participant observations were conducted and recorded to triangulate the evidence collected through other methods. For

Tailored training sessions, workshops and resources help community leaders help their communities effectively prepare, respond and recover from emergency events.

Image: Australian Red Cross

instance, when participants noted in interviews and surveys that their level of social connection had risen during the project, observation data could corroborate that through providing anecdotes and examples of increasing interactions.

Responsibility for adherence to ethical protocols was accepted by the Red Cross, which works within a safeguarding framework that includes trauma-informed practice and codes of conduct to provide protection of participants. Enacting those principles included working closely with Red Cross migrant support programs and hiring the local CALD community development worker to work in a trauma-informed and culturally safe manner.

Red Cross adopted an asset-based community development stance throughout this project that recognised and honoured the inherent strengths, knowledge, skills and cultural resources of the community members (Ife 2016). Instead of viewing participants as passive beneficiaries, they were acknowledged as active contributors to the project. Engagement tools included meetings, workshops and individualised support as well as significant collaboration with community leaders in the project's design and implementation. The participatory nature of this project lent itself to an embedded internal 'everyday evaluation' approach where data was regularly collected, analysed and reinvested into the project (Kelly 2019, 2021), highlighting the oft overlooked and underused value of monitoring (Kelly and Reid 2021). In addition to the findings reported here, this approach offers a novel methodology for monitoring and evaluating other community-based projects (Kelly and Rogers 2022; Wadsworth 2011).

Needs and capacity assessments for the 3 communities provided baseline data that was used to review post-project progress. Surveys were administered to participants before and after the events and workshops. These surveys gauged participant self-reported changes in social connectedness, knowledge of resilience and psychosocial effects of disasters, confidence in coping with disasters and intention to share resilience-related information with their networks. The team also collected a wealth of qualitative data, including in-depth interviews with participants at project end. While these interviews were conducted by Red Cross personnel from outside of the project, and participants were encouraged to provide honest feedback to aid project improvement. The internal nature of this data collection does pose some limitations.

Throughout the project, the team engaged in multiple conversations, meetings and workshops with community leaders and members. These interactions built trust and rapport and provided rich qualitative data that fed into programming. This information was collected using a digital form in an online open-source software (KoboToolbox), which was designed to correspond with the outcomes and indicators in the broader programmatic monitoring and evaluation framework (Kelly et al. 2022b). Additionally, personnel gathered their observations regarding group dynamics, especially when it came to task allocations and group interactions and stored them using the same software platform. This informal data collection extended beyond engagement with community members and included collaborations with other emergency services agencies, community support organisations and council staff. This promoted a holistic understanding of the ecosystem surrounding CALD community resilience-building.

Consistent collection of data from various stakeholders provided valuable insights that allowed for real-time project improvements. The findings were synthesised and discussed regularly by the team through formal and informal reflective sessions where personnel would consider the data, deliberate on whether and how to action suggestions and initiate plans to implement changes. As well as this formative analysis, the data collected throughout the life of the project was collated and analysed for a summative internal evaluation. At this point, personnel identified key themes in the data using thematic analysis (Braun and Clarke 2006) and the findings were categorised into what worked well and areas of improvement for future projects. While the ensuing report from this final analysis provided an overarching evaluation of the project, ongoing feedback and updates from

collaborative governing councils that formed across the 3 communities as a result of the project provide Red Cross and the communities with a mechanism to grow influence and monitor sustainability.

Project outcomes

The evaluation process revealed several findings related to the efficacy of the project, its reception within the community and its long-term potential. Participants noted the rising collaborative spirit within their community, which they attributed to the project activities. This included strengthened linking capital between community members and civil society, disaster management and council personnel as well as enhanced bridging and bonding capital between and within various ethnic groups across the 3 communities. This comment from a participant highlighted their recognition of social connection as key to effective disaster preparedness and recovery:

> *The most important thing is social capital. It is so important in case of emergencies and now I will try to increase awareness in my local neighbourhood so (that) we know each other and know how to respond to emergencies. The local community is all migrants and some Aussies. It must be that we are connected in case of emergency. It's so important to know my own neighbourhood and I will go beyond my street and introduce myself, and we should exchange numbers too.*
> (Project participant)

Other participants noted that they appreciated the opportunity to know more people in their own and surrounding communities and across various ethnic and religious groups. They felt this increased connection was important for preparedness as well as for general wellbeing. This sentiment was reinforced by the post-project data, which showed that 91.6% of participants felt more connected to their local community after the project.

The willingness of community members to step up and contribute was evident. Many showcased a keen interest in participating in the safety and wellbeing of their community and were excited that the project outlined mechanisms, such as the governing councils, to allow them to take an active role. One participant said, 'I want to be an active member of the community, so to learn about the disasters and, if they happen, how to manage them is useful'.

Brainstorming during the workshops helped participants identify 48 community initiatives that they would like to implement over coming years. They prioritised these and completed 6 during the project with another 6 in progress by the end of the project. These initiatives included community events such as the multicultural sports day for 121 attendees, welcome dinners for new arrivals, free swimming lessons for Muslim women and locally developed resources in various languages such as the Multi-Hazard Emergency Preparedness Kit and disaster preparedness training for young migrant families.

The disaster preparedness guidance was especially well-received and participants expressed an eagerness to learn and increase their skills. They saw the practical nature of the information and acknowledged that building their capacity around preparedness increased their self-efficacy and ability to help others. The pre- and post-survey data demonstrated positive shifts across all domains (Lejukole and Ramasundram 2022). Participants were asked to rate their knowledge of what they should do in a disaster between 0% to 100% (with zero being very low and 100 being very high). Results showed an improvement from 61.1% before the project to 86.7% after the project. Participant understanding of the psychosocial effects of disasters improved from 69.7% to 86.7%. Importantly, their confidence around their ability to cope with events grew from 71.7% to 92.2%. One participant said, 'I've learned something new about disaster risks and what I can do to prepare'.

The overall feedback was overwhelmingly positive, with many participants expressing a newfound sense of empowerment and camaraderie. One participant expressed their joy that the project gave them:

> *Realising how organisations can work to help really make a change and there are ways to put your ideas forward. If you want to do something about a problem, then you don't have to just hope it will come about and sit there wishing - you can actually do something yourself.*
> (Project participant)

Others noted that the project had helped reinforce their value that 'we all have a responsibility to take care of each other'.

Recommendations

The project provided lessons about emergency management in CALD settings. The approach of monitoring and evaluation, where qualitative and quantitative data were collected consistently and analysed through reflective practice sessions, enabled rich insights from participants. These insights can reshape our understanding and approach towards helping communities prepare and respond to crises.

The importance of trust between communities and authorities was raised throughout the project and within the literature (Marlowe et al. 2022). This emphasises the need for consistent engagement with CALD communities, not just during disasters, but as a regular endeavour. Workshop participants noted that this could include agencies providing training opportunities, events and culturally appropriate resources. Attendees at one of the community-led events recommended that authorities,

including civil society organisations and councils, need to be proactive about engagement. Attendees said it is not enough for these personnel to be present at community events and sit behind a stall; they need to come out and interact with people. Attendees raised that this is particularly beneficial for people who may have negative experiences with authority figures. This linking capital could be increased by emergency services agencies recruiting personnel from within the cultural community groups they are supporting and through co-design of resources and materials.

Participants' stated desires for closer collaboration between CALD community leaders and emergency services agencies points towards a policy implication where inter-agency collaboration is incentivised and facilitated at the state or national level. Further, the feedback about emergency services agencies being proactive in their outreach suggests a need for more culturally tailored approaches to disaster response and information dissemination. Policies that steer emergency services agencies should incorporate guidelines on cultural sensitivity, especially when dealing with communities that might be hesitant to approach figures of authority. Additionally, these guidelines should include support for maintaining neutrality and navigating the complexities of varied political, religious and socio-cultural nuances.

A potential hook for authorities to support CALD communities surrounds participant requests for training in areas like grant application writing, project management, event planning and risk assessment. The need for upskilling of community leaders underscores a gap in community resources. Local councils or government bodies might consider offering or expanding such programs. If emergency management agencies cannot teach skills requested by communities, connecting people with relevant training organisations provides pathways for ongoing capacity development. Agencies offering training should ensure that their pedagogy and learning resources cater to cultural sensitivities and individual capacities.

Participants noted that the heterogeneity within CALD communities necessitates diverse and customised approaches rather than a monolithic approach (Lejukole and Ramasundram 2022; Teo et al. 2019). This also applies when identifying the strengths and barriers of individuals and communities. Effective group management requires acknowledging the diverse skill sets and experiences within the group and ensuring equitable distribution of responsibilities (Rogers et al. 2021). The manager of this project noted that this requires skilful, neutral and observant facilitation, noting that it was often people who were more educated or fluent in English who took centre stage. Thus, it is important to encourage quieter and less confident participants to fully participate while respectfully requesting the more vocal and confident people to listen.

Collaboration with CALD community representatives in the design and implementation of emergency management processes helps ground activities in the realities and needs of the communities (Crawford et al. 2021). Similarly, enlisting community leaders and influencers can significantly enhance outreach and communication efforts due to their local understanding and ability to mobilise and motivate their community (Howard et al. 2017). This project prioritised authentic collaboration and resulted in participants who were excited by their preparedness plans and who felt empowered to enact them. This shows the value of this approach (Lejukole and Ramasundram 2022). Policymakers and program designers should consider promoting this engagement style in disaster resilience projects, recognising the value of community members as contributors.

Emerging CALD communities may face stressors related to their migration or refugee experiences that affect their levels of understanding and engagement. Financial stress, unemployment, language barriers, competing priorities and insecure visas are issues that can affect community participation. It is important to recognise people's situation and provide referrals or financial support to enable participation, such as allowances for transport, where possible. While these stressors are largely outside the remit of emergency management agencies, understanding these challenges are essential considerations for resilience programming.

Teo et al. (2019) found that English language skills are a significant predictor of preparedness among residents in CALD communities in Logan City, Queensland. However, participants in this project mentioned that the specific barrier is formal written documentation as, while migrants arriving on skilled visas are typically fluent in English, others, particularly women, older people and those entering the country on precarious visas may face illiteracy or low literacy. Participants suggested that providing resources in informal or spoken languages would be a solution. The project also brought to light subtle communication challenges, such as cultural nuances, which often go unnoticed and vary between individuals and groups. Training and collaboration with people from diverse populations would support emergency services personnel to identify and understand these exchanges.

Feedback mechanisms, predominantly designed for the majority populace, often fall short in addressing the needs and challenges of CALD communities. Feedback mechanisms should be dynamic, flexible and responsive. Critical review of monitoring and evaluation approaches, and co-design of appropriate methods with CALD groups, helps improve the appropriateness and utility of these mechanisms (Kelly and Rogers 2022).

Conclusion

Comprehensive, culturally sensitive and community-driven approaches to emergency management are vital to address resilience in Australia's multicultural population where disasters occur. This project offered insights into the intricacies of conducting a project using this approach and highlights the need for context-sensitive programming for different CALD communities.

At the core of the project's success was an asset-based community engagement model that recognised and capitalised on the inherent strengths and resources of community members. By viewing these individuals as active contributors and providing opportunities for them to collaborate with each other as well as with emergency services agencies, the project bridged the trust gap often observed between CALD communities and authority figures. This study demonstrated the potential within these communities. Positive participant feedback regarding the desire for collaboration, active volunteerism and upskilling emphasised the untapped reservoir of goodwill and capability.

Policy implications span across community engagement techniques, the necessity for broader inter-agency collaborations and the need for culturally tailored approaches throughout the preparedness, response and recovery cycle. These shifts are required to make emergency management more inclusive and effective. The recommendations are pragmatic but require emergency managers and other planners to commit to proactive engagement.

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Can't be what you can't see: progression and development of women firefighters (career and volunteer)

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Abstract

Fire and Emergency New Zealand (Fire and Emergency) is committed to developing a diverse and inclusive work force. While wāhine (women) have played an active role serving in urban and rural fire services since the 1940s, they remain significantly under-represented throughout Fire and Emergency, especially in leadership positions. Responding to an identified gap in knowledge about career experiences and expectations of the organisation's wāhine firefighters, Fire and Emergency commissioned a mixed-methods study. The primary source of data for the study was a series of interviews with 29 wāhine firefighters.[1] This was supplemented with relevant administrative data to provide background and context to the interview material. The overall aim of this research project was to foster understanding of wāhine firefighters' experiences in relation to barriers and enablers of their career development and progression, and thereby provide an important input to the changes required to make positive progress.

Setting the scene

Relevant Fire and Emergency administrative data were analysed to produce a profile of wāhine firefighters within the organisation at the current time, and to show how that profile has changed over time. Key points from inspection of the administrative data (as of 30 June 2022):

- **Low representation of wāhine** – operational firefighters make-up the majority (72%) of Fire and Emergency's wider workforce, and yet it is this role within the organisation where the lowest levels of female representation are found:
  - wāhine are a minority within career (5.7%) and volunteer (15.0%) firefighting workforces (or 13.5%, when both groups are combined)
  - wāhine firefighters are especially under-represented in leadership roles. Wāhine hold just 3.4% of executive officer leadership roles, 2.3% of paid operational leadership roles (Senior Station Officer/Station Officer) and 5.4% of volunteer firefighter leadership roles (Crew Leader or more senior).
- **Variable but generally slow progress** – the representation of wāhine firefighters has increased over time but, compared to other male-dominated industries, overall progress (particularly for career firefighters) has been slow. Gains in representation reflect a steady increase in the proportion of wāhine firefighters within annual cohorts of new recruits, which is occurring at a higher rate than among annual departures. However, progress is uneven, with an uptick in wāhine career firefighters exiting in 2021–22.

1. These wāhine were recruited from throughout Aotearoa New Zealand and included those with varied career paths (e.g. current volunteer and career firefighters, and those who had progressed onto non-frontline black watch roles or other National Headquarters positions).

The study showed that low representation of wāhine persists within the operational firefighters of Fire and Emergency's workforce.
Image: Fire and Emergency New Zealand

- **Shorter length of service for wāhine** – the average length of service of wāhine firefighters is considerably below that of tāne (men). It takes time for wāhine to progress their career and the tendency for wāhine to have shorter periods of service is limiting the numbers available to move into leadership roles. This is particularly evident for career firefighters where the average length of service for tāne is 17.1 years, but for wāhine just 7.7 years.
- **Gender equity indicators poor across countries** – comparison of Fire and Emergency service data across other countries suggests Aotearoa New Zealand sits somewhere in the mid-range when compared on gender representation in firefighter roles, as well as other gender equity indicators. It seems that all countries could benefit from work to improve the representation and standing of wāhine firefighters.

Currently, there is no readily available and continuously updated set of indicators by which progress can be monitored (e.g. a dashboard of indicators or regularly produced report), pointing to an area for improvement. Ensuring that data relevant to progression and development of wāhine firefighters are available, published and regularly monitored could play an important role in promoting and sustaining change.

Interviews with wāhine firefighters – a complex landscape with variable responses

On completing the interviews with the 29 wāhine, perhaps the most notable finding was the wide variability in the nature of their responses. Significantly, most had high-levels of satisfaction within their respective roles, but their experiences of factors that either hindered or helped them to develop and progress varied greatly. A particular issue (such as brigade leadership) might be experienced by some wāhine as a barrier, while for others it was an enabler. Further, different themes had very different levels of significance across those interviewed.

In making sense of the qualitative data, it became evident that a very complex 'landscape' underpinned the dataset. An attempt to represent this complex landscape, including the various dimensions along which such variability in responses was observed, is given Figure 1.

Five background domains emerged as central to the complex landscape upon which this study was conducted (see 5 tiles in Figure 1). These included:

- the new and evolving nature of the organisation, with much change occurring since the establishment of Fire and Emergency in 2017
- the diverse nature of the workforce and the differing working conditions for those in 'career land' versus 'volunteer land'

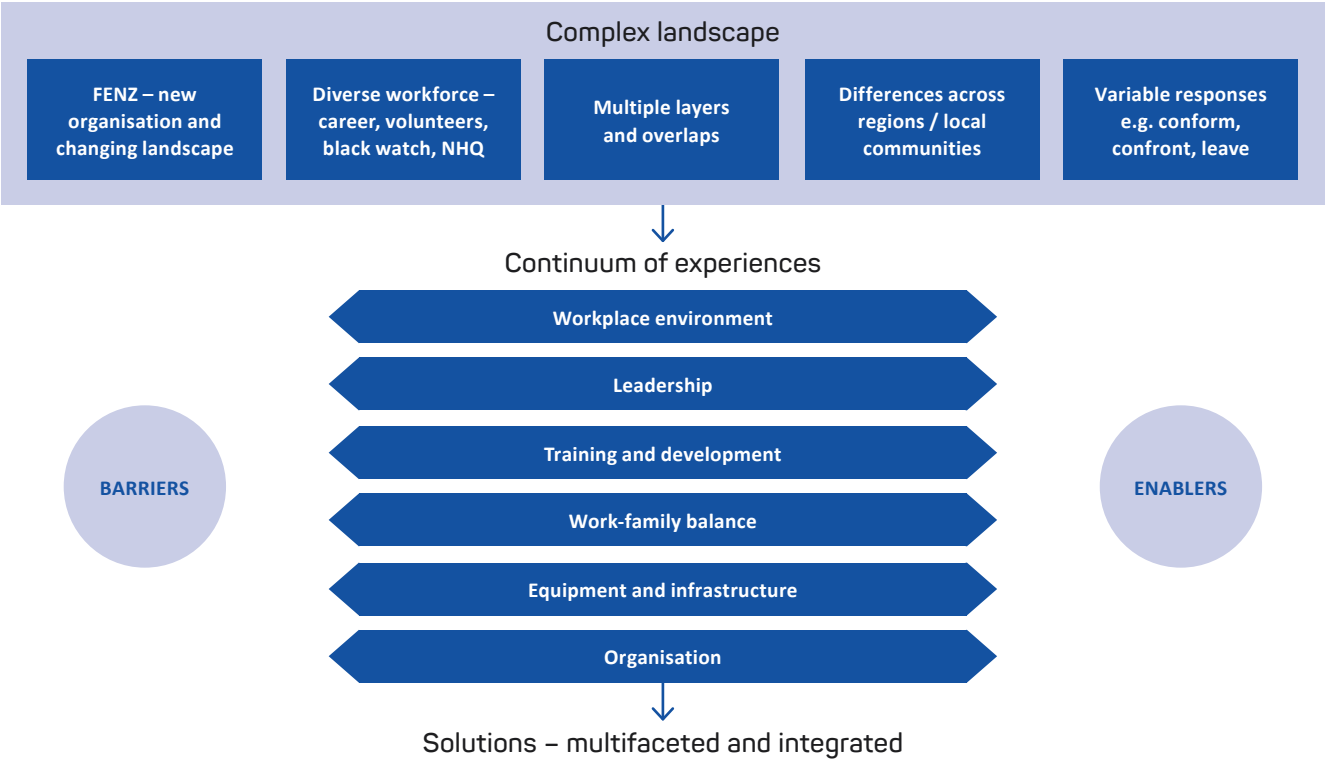

Figure 1: The complex landscape that shapes the experiences of wāhine firefighters.

- the complex and overlapping nature of issues involved
- regional differences creating a 'postcode lottery' of experiences across and within regions
- the variability among wāhine not only in what they experienced but in how they typically responded to challenges.

This range of responses was particularly evident in comments from wāhine firefighters in response to gender-based differential treatment. The diversity of responses can be summed up by example (actual) comments made: 'I don't see it', 'it doesn't offend me', 'I deal with it head on', through to 'it exhausts me!'.

The interaction of features and resulting variability in wāhine views and experiences meant the barriers and enablers identified in this study were best considered as continuums of experiences, organised into 6 themes (double-ended arrows in Figure 1). In general, there was more variability than consistency in wāhine views and experiences.

Barriers and enablers to career development and progression

Six themes emerged in understanding the key barriers and enablers to the development and career progression of wāhine firefighters. The primary focus was on factors affecting career progression, although some themes extended into retention of wāhine firefighters as an integral consideration.[2]

Workplace environment – the strongest theme to emerge among the wāhine related to experience of their workplace environment, and in particular the effect of culture of that workplace.

> *I was talking to a friend the other day and I said like... I don't think I'll be accepted as a brigade member. I'm tolerated as a brigade member but, like, I don't know that I'll ever be accepted.*
> (Volunteer firefighter)

Comments identifying barriers tended to outnumber references to enablers.

- Barriers – wāhine experienced non-inclusive environments that were disempowering and unsupportive of their career progression as well as the existence of subcultures or 'tribes' associated with different groups within the workforce served to reduce opportunities for progression and development.
- Enablers – these consisted of a mixture of factors that helped them endure the more hostile aspects of their work environment but also those that were more direct enablers of their career progression. Examples included brigades with an overall inclusive nature and informal mentoring and support from colleagues.

2. Retention is integral to firefighter career progression because the length of service (career and volunteer) is one of the pre-requisites to progressing through the ranks. Progression then opens up other career path opportunities within Fire and Emergency.

Responses to the study showed that wāhine firefighters easily identified gender-based differential treatment in the workplace.

Images: Fire and Emergency New Zealand

Leadership – the role of leadership emerged as a strong theme among wāhine both as a barrier and enabler to career progression depending on the particular skills and attributes of their leaders. This theme had considerable overlap with workplace environment, with the brigade leader playing a significant role in how the culture of the brigade developed. Brigade leaders could, however, also have more specific impacts on career progression in their roles as mentors and as gatekeepers of training and development opportunities.

- Barriers – leaders could act as a barrier to the retention of wāhine and to their career progression. Experiences ranged from blatant discriminatory behaviour by the leaders of the brigade through to inaction and ineffectiveness that resulted in negative outcomes.
- Enablers – encouragingly, it was more common for wāhine to describe leadership in terms of enablement. This occurred through direct actions such as proactive career guidance (e.g. shoulder tapping), coaching before interviews or training courses and enhanced confidence resulting from affirmation and encouragement.

Training and development opportunities – training and development inevitably were important themes in this study. Within this were experiences of training, particularly courses held at the National Training Centre and access to developmental opportunities.

- Barriers – negative experiences of training and/or the absence of formal career planning were 2 significant barriers to the career progression and development of wāhine firefighters. The former was more specific to wāhine, but the lack of career planning and other opportunities appears to apply equally to wāhine and tāne firefighters.
- Enablers – there were several ways training and development opportunities were experienced as enabling. These included openings and opportunity to develop different skills and people networks within the organisation, positive training experiences enhanced by the presence of female trainers and attendance of other inspirational female-themed professional development opportunities (e.g. conferences).

Work-family balance – despite a majority of the wāhine interviewed being 'working mothers' at some stage of their careers (approximately 70%), few brought this topic up without prompting. There was a degree of acceptance of the challenges posed of juggling work and family responsibilities, with the sentiment that 'you just make it work' commonly voiced. On probing, it became apparent that childcare was a pervasive issue in relation to career progression for wāhine. Managing childcare responsibilities presented stressful challenges to wāhine firefighters and restricted access to developmental opportunities.

In terms of identifying specific barriers and enablers, most of the discussions centred around the factors that created special difficulties (barriers) as well as strategies that helped wāhine manage these challenges (enablers).

- Barriers – special challenges to managing childcare responsibilities included childcare being expensive and ill-suited to shift workers, the pressures to do overtime and the 'massive mum guilt that kicks in', the burden on families created by residential training courses and the need to travel, challenges of coming back after pregnancy and childbirth. A few wāhine spoke of the effects of being a firefighter on relationships. Those who raised this, described tensions created by them working in (at times) hostile workplaces.
- Enablers – factors that eased barriers included access to support, mechanisms to keep family members informed on childcare needs, the availability of different career paths to suit personal circumstances and - for volunteers - the implementation of local and

innovative solutions. The presence of these factors meant wāhine were less likely to be in the position where they had to choose family over career. While these were described as enablers for wāhine, many apply to tāne with caregiving responsibilities.[3]

Equipment and infrastructure – this theme provoked frequent and animated responses with poor-fitting uniforms and protective gear the most common topic of conversation. Many were exasperated with a lack of improvements despite the issue being around for decades. This theme was distinct in that wāhine spoke only of difficulties experienced with no enabling factors identified.

- Barriers – issues with ill-fitting uniforms, protective gear and inadequate fire station facilities created barriers to the retention of wāhine firefighters as they had negative effects on job satisfaction. They created health and safety concerns, impeded the ability of wāhine to work efficiently and made them feel like they didn't belong.

'Nothing is a bigger daily reminder that you don't belong here than the uniforms'.
(Career firefighter)

Organisational experiences – in general, wāhine did not say a great deal about Fire and Emergency as an organisation. There was a clear disconnect between their own 'truck world' and the work of those in national headquarters responsible for the operations of the organisation. This disconnect was evident in low levels of awareness of (or interest in) organisational priorities and values.[4] When prompted to share thoughts on their experiences of organisational processes, there was recognition of the role of the organisation in achieving change for wāhine.

'Organisation' as a frame potentially subsumes all of the issues dealt with under the theme headings above. Those highlighted were additional organisation-related aspects identified by the wāhine and not accounted for within other 'themes'.

- Barriers – organisational processes were experienced as inefficient, especially human resources, the complaints resolution process and implementation of roll outs. The appointment processes, in particular, were considered as unnecessarily lengthy, insufficiently transparent and lacked feedback when knock backs occurred. The combined effect was one of de-motivation to participate any further in the process.
- Enablers – wāhine recognised the role of the organisation in achieving progress when working conditions were compared to those of 20, 10 or even 5 years ago. Wāhine also spoke optimistically that Fire and Emergency appeared genuinely committed to improving things and to developing a diverse and inclusive workforce, which was an important consideration for those wāhine planning a long career within the agency.

The study included many responses about poor-fitting uniforms and protective gear that had not improved for decades.

Image: Fire and Emergency New Zealand

Supporting career development and progression

Wāhine identified a range of support activities that they felt would facilitate the career development and progression of wāhine firefighters. Comments included types of support wanted, but also views on how best to implement or deliver the support.

Types of support activities

The types of support activities wāhine identified largely revolved around what was needed to address the barriers

3. Of note, none of the wāhine interviewed provided examples of how the Pregnancy in Operational Firefighting Policy (2019) had been an enabler for them, although, several talked positively about the policy and the value of the provisions it provided. It is possible none of the wāhine who participated had a pregnancy under the policy.

4. The main exception to this being the points of tensions under dispute between the New Zealand Professional Firefighters Union and Fire and Emergency as part of the industrial action that was occurring during the period. of the fieldwork. For example, there was a fairly common sentiment amongst those on the frontline (both career and volunteers) of 'those on the shop floor not being valued'.

The study showed that wāhine were optimistic that Fire and Emergency were committed to developing their roles operationally.

Images: Fire and Emergency New Zealand

or to enhance enablers they had previously identified. Support activities more directly related to career development and progression. These appear first in the list below, while the ones important to wāhine but relating more to retention appear lower down (the ordering below is not intended as to convey prioritisation):

- **structured career planning advice** – for example, annual performance reviews and professional development planning sessions with ongoing support to achieve career goals identified
- **programmes to develop future leaders** – establish a systematic approach to identifying and supporting future leaders (including wāhine),including formal mentoring and sponsor-type systems
- **accessing developmental opportunities** – ensure equitable access to relevant developmental opportunities (e.g. secondments, deployment opportunities, project work, taking on local representative roles)
- **making learning more attractive** – for example, more females in trainer roles, flexible styles of instruction to suit wāhine, increased use of distance learning where possible and scheduling courses so wāhine have the option of attending with other wāhine
- **supportive and inclusive workplace environments** – continue this important and complex area of work to enable wāhine to take up opportunities and develop the skills and confidence needed to progress into leadership roles while also maximising their retention
- **developing effective and inclusive leaders** – provide early and ongoing opportunities to develop leadership skills, supporting wāhine to develop and progress into roles they value as well as continue/expand the concept of male champions to advocate and model inclusive behaviour
- **access to wāhine networks and mentors** – for support, guidance, inspiration and as a lever for collective action to provide support for wāhine to contribute to the work of Women in Fire and Emergency New Zealand (WFENZ), increase awareness of achievements and understand and address misperceptions associated with participation in the network
- **flexible working and support with childcare** – continue to explore options for job/shift sharing to enable flexible working, provision for childcare that is suitable/affordable for those on shift work; adopt family friendly conditions for those attending training courses and support brigade innovations that offer solutions (e.g. volunteer brigade creche and nannies)
- **eliminating unconscious bias and structural barriers** – removal of unconscious gender bias in language (e.g. more consistent use of firefighter/firefighters than fireman/firemen) and structural barriers in recruitment and appointment processes (e.g. inclusion of wāhine in interview panels, increased transparency around appointments)
- **effective resolution of complaints** – recognise the valuable role that WFENZ and the Women's Development team at Fire and Emergency provide as 'safe places' to access confidential advice and support; ensure wāhine feel supported, are made aware of the range of options available to them and can retain control over decisions impacting them
- **providing ergonomically suitable clothing and gear** – this is essential for wāhine to carry out their work safely and effectively and to feel like they belong, ensure wāhine are included in the decision-making around equipment procurement and increase awareness and access to current options to remedy poorly fitting gear (e.g. tailoring, special orders).

Overall approach to delivery – inclusion and respect

One of the consistent messages from wāhine in this study was that they did not want special treatment nor to be singled out in any way because they were wāhine. Instead, they wanted to be seen and valued for their work as firefighters.

> *'…it doesn't feel good being overlooked, but it doesn't feel good catching the updraft'.*
> (Career firefighter)

This meant they were generally unsupportive of diversity-led goals achieved through gender-based quotas or targets. Wāhine were, however, supportive of inclusive and equitable practices where they were not disadvantaged because of their gender.

The views of the wāhine in this study align with those found by other researchers, which point to the achievement of effective diversity being a long-term proposition that requires commitment to the creation first of an inclusive culture. Achieving an inclusive and respectful workplace will enable wāhine who are progressing their careers to be able to 'step up to a place of safety'.

The following 3 aspects of an overarching approach were endorsed by wāhine in this study:

- **initiatives that achieve targeted goals for wāhine but delivered as organisation-wide projects** – most, if not all, of the support activities identified by wāhine could benefit both wāhine and tāne firefighters and should be delivered as an organisation-wide project without prioritising a gender
- **expert advice from wāhine needs to be integrated throughout the organisation** – the scale of the work required for wāhine to have equitable access to opportunities to progress their careers needs to be recognised and requires integrated working across the organisation, with expert advice from wāhine embedded across all processes and work programmes
- **leverage the strong team-based culture and value placed on high performance** – a focus on how team performance can be enhanced through becoming more diverse, adding a wider range of skills and attributes, will be less polarising than simply arguing for more diversity within the workforce simply because it is the 'right thing to do'.

Conclusion

In understanding the barriers and enablers to the career development and progression of wāhine firefighters, this study found the experiences of wāhine and their responses to these experiences are highly variable (particularly across volunteer brigades). This means wāhine may not need (or want) the same level or types of support and blanket approaches to delivering change may not be effective.

It was also confirmed that there is no 'silver bullet' that might rapidly guarantee organisation-wide improvement in the representation of wāhine firefighters in leadership positions. Instead, a multi-pronged approach to the problem is required, with a long-term commitment and an overarching focus on creating inclusive cultures. While wāhine recognised a genuine commitment by Fire and Emergency to improve their working conditions and to ensure they flourish within it, they are frustrated with the perceived slow speed of progress.

The career experiences of wāhine can be viewed as an important indicator of the broader health of the organisation. When conditions improve for wāhine firefighters, all members of the organisation will likely experience a positive workplace. Identifying and delivering outcomes that can be achieved in the short-term (e.g. career planning advice, making training more attractive, providing ergonomically suitable gear and clothing) will be important while longer-term critical changes that underpin many of the other areas of change needed are progressed (e.g. inclusive and respectful workplace environments with effective and supportive leadership).

> *… women absolutely can nail being a firefighter, and working all the way up the ranks, absolutely. What I ultimately wish is that there were greater levels of support for women to do it – because we do it anyway without it, but could you imagine how amazing it would be if women were as supported as the guys are, could you imagine the kind of leaders we would have? Truly extraordinary.*
> (Volunteer firefighter)

Acknowledgments

Acknowledgment and thanks are extended to Barb Olah, Kaye AhSam, Tehniat Qureshi and Nicole Dobson of the Women's Development Team for their instigation of this research and their ongoing support and expert guidance throughout. Thanks to Te Ao Mārama (the research and evaluation team at Fire and Emergency) who provided excellent oversight and project management. Acknowledgment is extended to the Human Resources Team, particularly Wendy Cordell, for the supply of data and to the multiple members of the Project Reference Group at Fire and Emergency for their careful reviews and feedback. Special thanks to the remarkable wāhine who gave up their time to talk candidly about their lived experiences as wāhine firefighters. Their commitment, strength, determination and compassion were truly inspiring.

The final research report was submitted to Fire and Emergency New Zealand in April 2023. The report is available at https://portal.fireandemergency.nz/our-networks/our-people-networks/women-in-fire-and-emergency-wfenz/progression-and-development-of-women-firefighters/.

From hero to host: moving beyond gendered stereotypes in emergency management leadership

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Abstract

Leadership in times of volatility and uncertainty has come under increasing scrutiny. There is a need to critically examine how crisis management leaders develop their leadership practices and what leadership practices are needed to support teams, stakeholders and communities in conditions of transition, change and deep uncertainty. Just over a decade ago, Owen (2013) reported research that examined the gendered nature of incident management. That research included a survey of emergency response agencies that were members of the Australasian Fire and Emergency Service Authorities Council (AFAC). Survey respondents included 476 men and 77 women. In incident management teams the women surveyed were predominately in planning and logistics functional team leader positions and, of the 117 incident controllers/deputy controllers included in the study, only 4 (5%) were women. The research reported that women experienced working in such teams as culturally challenging, in part because of a masculinist culture often referred to as a 'command and control type attitude' (Owen 2013, p 7). In considering this, this paper explores the representation of women in leadership positions in emergency management and what attributes women bring to these roles. The paper concludes by proposing a move beyond gendered stereotypes of leadership (masculine/feminine) towards the metaphor of 'leader as host'.

Background

Traditional ways of leading crisis response, often referred to as 'command and control', have been criticised as unresponsive and insufficiently agile in dynamic conditions (O'Rourke and Leonard 2018). The recent reviews of responses to extreme weather emergencies in New Zealand[1] identified overconfidence of response leaders and a lack of leadership in building collaborative multi-agency, community-focused capabilities and operating procedures were significant inhibitors to effective response. While ways of organising are changing, the cultural norms of crisis management leaders are also changing. This challenges the traditional conception of leadership towards a more communal (i.e. people-oriented) definition. In this context, new conceptualisations of leadership are emerging that requires effective ways of enhancing stakeholder knowledge as well as innovative skills and abilities to work in teams rather than to focus on pure tasks and outcomes.

Leader as hero – archetypes of command and control

Traditionally, emergency services organisations have been structured hierarchically with clear command-and-control arrangements. Command and control is defined as 'the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment

1. See: Bush International Consulting (2023) *Auckland Flood Response Review* (https://ourauckland.aucklandcouncil.govt.nz/media/je3potln/auckland-flood-response-review_january-27-29-2023.pdf), New Zealand Civil Defence (2024) Independent Review Release (www.hbemergency.govt.nz/cyclone-gabrielle-review/review-release/) and Department of Internal Affairs (2024) *Report of the Government Inquiry into the Response to the North Island Severe Weather Events* (www.dia.govt.nz/diawebsite.nsf/Files/Government-Inquiry-into-Severe-Weather-Events/$file/Report-of-the-Government-Inquiry-into-the-Response-to-the-North-Island-Severe-Weather-Events.pdf).

of the mission' (O'Rourke and Leonard 2018, p.3). The framework has its origins in the military and the historical legacy is still present in, for example, the ranking structure (e.g. captains, commanders) used in many organisations.

Stereotypically, masculine qualities such as ambition, independence, dominance and rationality are associated with the traditional, hierarchical component of leadership that is characterised by instrumental behaviours (i.e. being goal-oriented) and represented by the so-called 'think leader - think male' stereotype (Schein 1973). In discussing the cultural changes needed in the police force in the United Kingdom, McKergow and Miller (2016) note that while heroic leadership is important in, for example intense situations, this style of leadership risks disempowering those who are being commanded, in part because it privileges the leader 'over' the team. They comment that:

> *…this style of leadership is defined as the strength of the leader's will and deference of their team, who act almost like an extension of the leader: executing duties without asking questions.*
> (p.3)

These historic approaches to crisis leadership are in contrast to a more open communicative type – the leader as host (Wheatley and Frieze 2011; McCrystal et al. 2015).

Leader as host – archetypes for engagement

To address the challenges of leading in uncertain conditions in ways that are adaptable, there has been a call for more collaborative and relational forms of working to build multi-stakeholder commitment and engagement in solving 'wicked' problems (Dentoni 2018). Leaders need to draw the best out of their teams without treating them as foot soldiers (McKergow and Miller 2016) because only with group input will we be able to generate the solutions needed for novel, complex and wicked problems.

Instead of hierarchical or directive leadership styles, relational leadership is the interactive influence among individuals in groups for which the objective is to lead one another (Pearce and Sims 2002 in Gartzia and Van Engen 2012). Looking for leaders who are adept at consensus-building and engagement requires interpersonally oriented leadership. This includes helping and showing concern for subordinates, looking out for their welfare and being friendly and available, which does not coincide with the traditional masculinist leadership role (Long et al. 2019).

Host leadership acknowledges that in times of uncertainty and volatility leaders are not totally in control of what happens (McChrystal et al. 2015). What they can do is set a context and creates background conditions for teams and other stakeholders to do what needs to be done (Owen et al. 2015). The metaphor of host yields valuable practical connections for leadership development (McKergow 2015).

Building leadership capability

This paper reports on findings from a review of data collected during the last 5 years of a leadership professional development programme conducted in New Zealand for response and recovery leaders. Response and Recovery Aotearoa New Zealand (RRANZ) is a programme to develop leaders operating in disasters[2]. It provides professional training for response and recovery leaders working in the public and private sectors across the country's all-hazards National Security System at local, regional and national levels. To enter the programme, participants must be working in an emergency response or recovery role. To complete the programme, participants undertake a 7-week online course and complete an intensive week-long face-to-face course. During this period, participants engage in a series of exercises and discussions with a range of experts working in the sector. As part of their preparation for the course, participants undertake a 360-degree feedback process where they provide their perceptions against a Leadership Capability Framework (RRANZ 2019)[3] and invite others (peers, managers, direct reports) to provide feedback on their performance against those capabilities.

We have used data collected as part of that feedback process to address the following questions:

- Where are we now in terms of representation in emergency management leadership positions?
- What have we learned about men and women in these leadership roles?
- What comes next?

Representation

To explore whether there are gender[4] differences in the ways in which men and women self-report their leadership capability and the degree to which others perceive leadership capability, an analysis was conducted of a database containing 157 responses from alumni who have completed the programme (Table 1).

The survey asked participants to report how long they had worked in emergency management. Table 2 shows that women are relative newcomers to working in emergency management, having a median experience of between 3 and 5 years, compared to the men who had between 6 and 10 years. Figure 1 illustrates the proportion of men and women within these experience bands.

2. Response and Recovery Aotearoa New Zealand: https://rranz.org.nz/

3. This framework outlines the capabilities central to effective leadership in response and recovery management. These capabilities apply to organisations in the public and private sectors. The capabilities are relevant to personnel working in the various response and recovery leadership roles, functions and operational areas of all organisations involved in incident and emergency management and are relevant to all hazards and all agencies at all levels.

4. As defined by the he/she pronouns participants ascribe to themselves and used by their peers.

Table 1: Responses from the 360 feedback on leadership capability.

Responses	Self-reports	Other reports
Male	97 (62%)	645 (61%)
Female	60 (38%)	418 (39%)
Total	**157 (100%)**	**1063 (100%)**

Table 2: Years working in emergency management.

How many years of experience (overall) have you had in emergency management?		
Years of experience	**Women (Cum %)**	**Men (Cum %)**
0–2 years	15	11
3–5 years	19	26
6–10 years	11	18
11–15 years	8	17
16–20 years	4	13
21–30 years	3	8
more than 30 years	2	6
Total	**62**	**99**

Emergency management leadership capability

The response and recovery capabilities used to assess performance are organised into 6 themes.

1. **Setting direction:** Thinks, analyses and sets direction with long-term objectives in mind, making sound decisions based on complex information where there is uncertainty, ambiguity and significant consequences. Includes:
   - strategic thinking - sets and adjusts strategic direction in a dynamic environment to determine wider goals
   - information and opportunities - takes an intelligence-driven approach to sense-making, situation development analysis and decision-making to create and maximise opportunity through collaborative use of information
   - problem-solving and judgement - makes effective decisions in appropriate timeframes with the right tools
   - agility and innovation - generates and adapts to new approaches, is flexible to shift focus and actions, works with pace.
2. **Leading people:** Builds, leads and extends leaders and teams to bring out the best in people and create a strong and positive culture, shared direction and high performance. Includes:
   - achievement through others - delegates and maintains oversight of work responsibilities and leverages the capability of recovery/response management teams, governance, peers and partner organisations to deliver outcomes
   - empowerment - enables others to act on initiative to develop and improve their performance
   - building culture - shapes, influences and models a culture that empowers others to deliver
   - diversity - ensures the workforce reflects and develops diversity of people and perspectives
   - lifting team and individual performance - builds cohesive and high-performing teams and brings out the best in direct reports and their people to deliver collective results that are more than the sum of individual efforts
   - developing talent - coaches and develops diverse talent to build the people capability required to deliver outcomes.
3. **Managing relationships:** Inspires confidence and builds strong trust relationships, engages with teams, communities, iwi, stakeholders, advocates, political representatives and partners to identify needs,

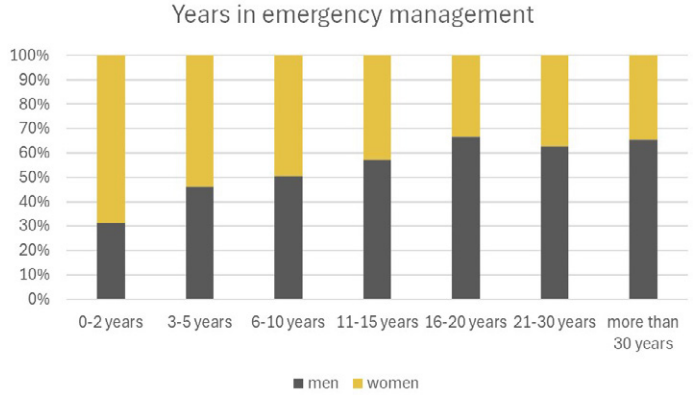

Figure 1: Proportional representation of men and women by experience in the emergency management sector.

influence actions, negotiate solutions and jointly deliver on response/recovery goals and plans. Includes:

- connecting with people - builds trust and be a leader that people want to work with and for
- engaging with communities - appreciates, partners and supports communities and represents response/recovery effectively and positively in community contexts
- multi-agency collaboration - works collaboratively with lead, partner and support organisations
- leading at the political interface - engages and represents within and between the public sector, iwi, private sector and community leaders to shape, negotiate and implement national, regional, local and community priorities
- communicating with influence - communicates in a clear, persuasive, impactful and inspirational way, listens to others and responds with respect, convinces others to embrace change and take action
- social and cultural intelligence - applies understanding of individual and group behaviour, culture and community dynamics to relationships
- developing networks - establishes and maintains connections that benefit performance.

4. **Managing self:** Self-aware and actively manages own skills, qualities, attitudes and emotional state. Maintains effectiveness, momentum and stability of self and others when facing stress and challenges. Knows own capabilities, strengths and gaps and learns from every situation. Includes:

   - self-awareness - leverages self-awareness to improve skills and adapt approach quickly
   - curiosity and open-mindedness - shows curiosity, flexibility and openness in analysing and integrating ideas, information and differing perspectives
   - honesty and courage - delivers hard messages and makes unpopular decisions to advance the best interests of people and communities
   - emotional control - manages own emotional state under pressure and sets the tone for others, helps others maintain optimism and focus
   - resilience - shows composure, grit and a sense of perspective when the going gets tough
   - ethics and integrity - holds themselves accountable for their actions, respects democratic, professional, ethical and people-values, builds respectful, diverse and inclusive workplaces.

5. **Engaging and partnering with Māori:** Builds the knowledge, capability and mana to engage with Māori in an effective and valued way. Understands role and responsibilities in relation to the *Treaty of Waitangi* and actively partners with whānau, hapū and iwi in response and recovery. Includes:

   - partnerships under the *Treaty of Waitangi* - as a leader, understands and promotes the importance and relevance of the *Treaty of Waitangi* for response and recovery and fulfils partnership obligations under the Treaty
   - understanding Te Āo Māori - develops and uses understanding of te reo Māori and tikanga Māori in range of informal and formal settings
   - engagement with Māori - engages and builds successful enduring relationships with Māori at iwi, hapū or whānau levels (relevant to the situation) that influences decisions and actions.

6. **Delivering results:** Translates strategy and decisions into action and plans and prioritises effectively to make sure the right things happen. Focuses on getting things done with and through others to coordinate activities and create change and benefit in communities. Includes:

   - achieving ambitious outcomes - demonstrates achievement drive, ambition, optimism and delivery focus to make things happen and achieve results
   - organisation and system performance - works collectively across system boundaries and levels of response/recovery, communities, stakeholders, elected officials, government agencies, business and partners to deliver sustainable improvements to systems and communities
   - leading change through people - chooses and applies the right change management approaches to the context to support successful change
   - programme management - translates strategy into action through managing across projects and change activities to deliver community benefits
   - managing work priorities - plans, prioritises and organises work to deliver on short-, medium- and long-term objectives
   - resource management - secures and makes the best possible use of resources, capabilities and assets to deliver on objectives.

The following are the questions and options for self and other assessment:

- **NA/No opportunity to demonstrate** - no or very limited experience in the situations in which you were expected to be able to demonstrate the capability.
- **Has opportunity but did not demonstrate** - you've had the opportunity but not felt that you could demonstrate the capability.
- **Developing** - you've demonstrated the capability in some straightforward situations with guidance and advice.

- **Competent** - you've demonstrated the capability quickly and competently in moderately complex situations, with limited guidance.
- **Highly competent** - you've demonstrated the capability in major situations in a fluid, flexible, highly proficient manner without guidance.
- **Advanced** - you've demonstrated the capability in the most severe and complex situations at the highest level.

Figure 2 shows that male participants rated themselves more highly than women on all but 2 of the capabilities. The 2 capabilities female participants rated themselves highly on were 'Connect with people' (to build trust and to be a leader people want to work with) and 'Develop networks' (to establish and maintain connections which benefit performance). Higher self-reports from men may be because they have worked in the emergency management sector for longer. It may also suggest that men regard themselves as capable because they are comfortable and confident with their leadership identity, especially within a traditional culture of command-and-control. This is a common theme in the literature (see Aggestam and True 2021; Garikipati and Kambhampati 2021; Waylen 2021).

These findings illustrate that the gender imbalance in emergency management noted a decade ago is gradually changing. However, women underestimate their skills in key emergency management capability areas relative to males and this may influence their willingness to take on, or put themselves forward, for leadership positions.

Of interest is that, in contrast, feedback from others on the assessment of leadership capability rated women higher on more than half of the capabilities than their male counterparts. Figure 3 shows that women were rated highly on the capabilities of achieve ambitious outcomes, develop networks and communicate with influence at statistically significant levels. Applying social and cultural intelligence, leading at the political interface, multi-agency collaboration, engagement with communities, agility and innovation, problem-solving and strategic thinking were all reported at higher levels of performance than for men. Feedback received from others indicated men rated higher on leadership capabilities of resource management, empowering teams and emotional control.

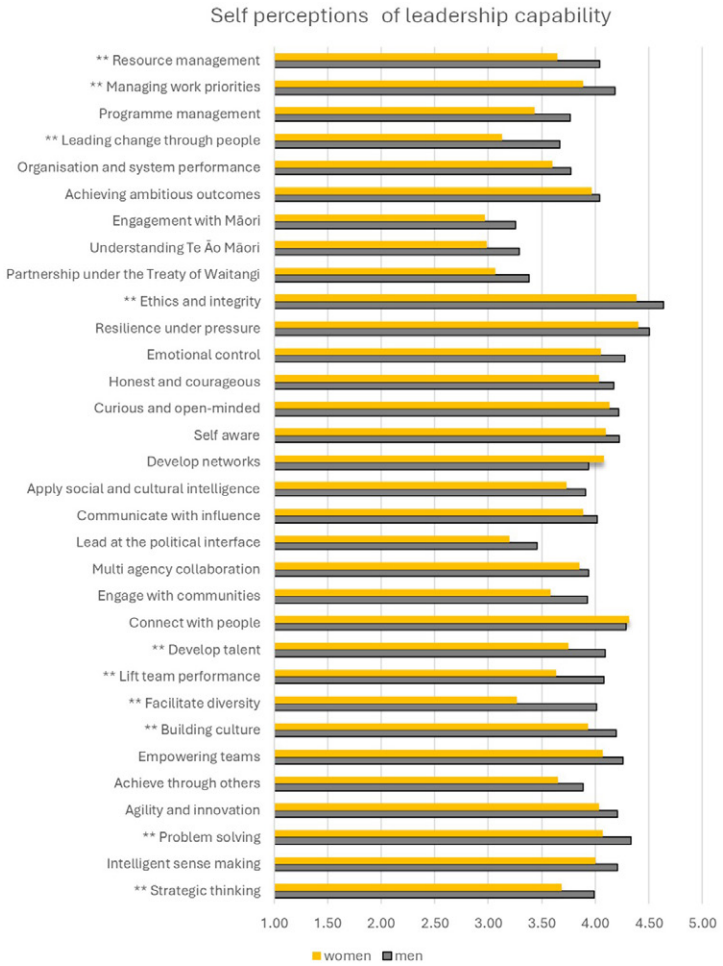

Figure 2: Self-assessment on leadership capabilities: women (yellow) and men (grey). Note: Items asterisked ** are statistically significant at the p<.05 level.

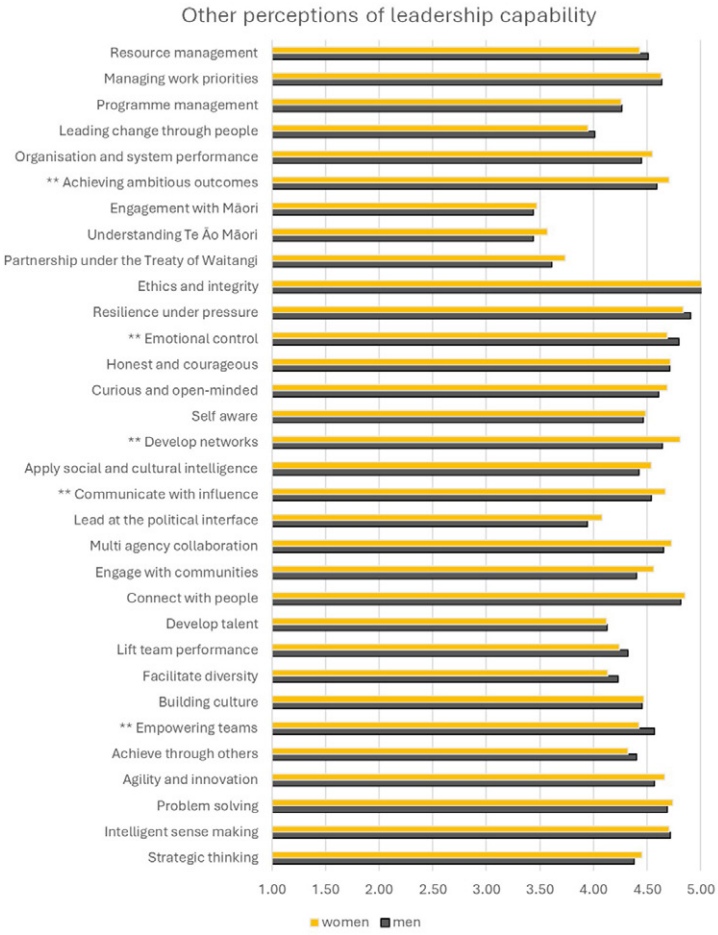

Figure 3: Others assessment on leadership capabilities: women (yellow) and men (grey). Note: Items asterisked ** are statistically significant at the p<.05 level.

Discussion

There has been ongoing discourse within the literature about feminine and masculine styles of leadership with claims that female attributes are needed in the future (Blake-Beard, Shapiro and Ingols 2020; Gerzema and D'Antonio 2013; Gartzia and Van Engen 2015; Hardacker 2023). We eschew this approach and instead look to the leader as host as an appropriate metaphor. These data show that while the host leader behaviours show up in this study strongly in women, this is because, arguably, they have been enculturated into adopting behaviours associated with consensual interpersonal interactions. Similarly, masculine leadership styles (e.g. of obtaining resources) are indicated in these data as showing up more in men.

Men and women leaders need to build on the strengths they have developed over time and develop the attributes of hosting. Host leaders integrate the attributes indicated by both genders in this study. Host leaders set the context; they protect their teams by taking on supportive and engaging roles and they enable others to achieve results. Host leaders are not servant leaders because, while they serve, they are also responsible for others in their accountabilities. Host leaders participate in the events they lead and they balance the need to step up and to plan, arrange and direct with the need to step back, nudge where necessary and bring out the best in others (McKergow and Miller 2016). McKergow and Miller (2016) also noted a host leader is clearly an authority figure but one whose authority comes from personal engagement, from attention to detail, connection and invitation. A good host leader knows when to intervene and be proactive and when to step back.

Where to next

These data suggest that women are clearly capable but underrate the qualities they bring to their leadership roles. The data also suggest that male domination within the sector is shifting. While response and recovery roles are including more women, it is important to continue to encourage women into these leadership positions. This requires attention to create work cultures that are supportive to different styles and approaches. In addition, it is important to address any barriers that exist so that workplaces are welcoming (e.g. considering family obligations for men and women).

We suggest it is time to review the Leadership Capability Framework (RRANZ 2019). For example, capabilities such as 'emotional control' are no longer fit for interpersonal interactions that require emotional intelligence. Leaders who perceive themselves as expressive (i.e. including traits such as being empathic, sensitive or concerned with other's needs) are reported in the literature as more effective leaders (Gartzia and Van Engen 2012).

These findings provide opportunities to consider the ways in which differences in leadership identity are both part of the problem (heroic) and part of the solution (host). The findings challenge researchers and practitioners to move beyond gendered identities to ones fit-for-purpose in volatile and uncertain worlds.

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GADAus literature review collection

Loriana Bethune

Gender and Disaster Australia

Gender and Disaster Australia (GADAus) aims to be the leading national organisation offering evidence-based education, training and resources to address the harmful effects of gendered expectations before, during and after disasters. One of its most notable recent projects was to develop resources that combine academic and grey literature within particular themes.

These reviews delve into crucial topics and serve as a valuable resource for the sector, offering an evidence base to address gender and gender-based violence issues within in the emergency and disaster management realm. This issue of the *Australian Journal of Emergency Management* presents a selection of reviews from the collection (see Endnotes).

The reviews offer nuanced, evidence-based insights into current sector and academic thinking on various themes and their relationship with gender and disaster. Recognising that time is a scarce resource in the sector, the reviews are succinct so readers can quickly grasp the debate in relation to each theme and how it may influence their work. The reviews could be seen as a provocation for further discussion and action within disaster management and emergency services. They aim to prompt and provide evidence of reconsideration of current practices and policies and push for an inclusive and responsive approach to gender and disaster issues.

The reviews aim to increase understanding of gender issues and inform effective strategies. Finally, they can be used to guide other work. Each review identifies gaps where further attention is required to progress an inclusive and gender-responsive sector so those appeals for change do not fade into silence.

The GADAus literature review collection includes:

- disabilities, gender and disaster
- First Nations, gender and disaster[1]
- intersectionality, gender and disaster
- masculinity, gender and disaster[2]
- rurality, gender and disaster
- sexual violence, gender and disasters[3]
- sexual reproductive health, gender and disaster
- socio-economics, gender and disasters[4]
- volunteering, gender and disaster
- culturally and linguistically diverse (CALD), gender and disaster.

The collection is available on the GADAus website: https://genderanddisaster.com.au/resources.

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4. GAD Aus Commissioned Report (2024) 'The Socio-economics of gender and disaster' (summarised) *Australian Journal of Emergency Management,* 39(3):94-95.

THIS REPORT IS A REPRODUCTION OF A LITERATURE REVIEW COMMISSIONED BY GENDER AND DISASTER AUSTRALIA AS PART OF A RESOURCE-BUILDING PROJECT.

Rurality, gender and disaster: a commentary

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Abstract

Australia has experienced a number of catastrophic disaster events in recent times both as slow-onset, for example the drought between 1996 and 2010, and rapid-onset including the Black Saturday bushfires in 2009, the bushfires in several states in 2019–20 and the floods in northern New South Wales in 2022. Overlaid on these events was the global pandemic that caused widespread morbidity and mortality and constrained communities from finding mutual support in organised gatherings. While Australia has experienced major climatic events, the way they are addressed will determine how resilient the country will be in the face of future major events. This paper focuses on the gendered aspects of disaster experiences in rural areas of Australia. It will assist those with the capacity to help affected communities and respond with a clear understanding of the way gender shapes the disaster experience.

Introduction

The term 'gender' refers to the social factors and opportunities that shape us as male or female. In a disaster context, UN Women (2023) defines gender as:

> *...what is expected, allowed and valued in a woman or a man in a given context at any given time. It determines opportunities, responsibilities and resources as well as power associated with being female or male.* (UN Women 2023)

Before, during and after disasters there can be differences and inequalities between women and men in responsibilities assigned, activities undertaken, access to and control over resources as well as decision-making opportunities (UN Women 2023, p.1). While gender-based inequalities are noted in emergency management practice, what tends to be ignored are people who identify as LGBTIQA+ and that gender can be experienced across a continuum of experience. Critical to any nuanced analysis of gender are the intersectional factors that shape and extend gender vulnerability including poverty, indigeneity, ethnicity, age, income, ability, education, marital status, occupation, religion and location (Djoudi et al. 2016), all of which can accentuate the gendered complexities of the disaster experience.

While gender shapes the lives, experiences and patterns of behaviour adopted by women and men, gendered effects can differ across time and geography with, for example, rural and regional areas often identified as overtly male dominated. Campbell, Bell and Finney (2006, p.5) state that 'rural life is typically highly patriarchal'. Pini (2005, p.401) reinforces this, noting that there is often a particularly clear divide between men's and women's roles and activities in rural settings. Kinnval and Rydstrom (2019, p.5) contemplate similar gender inequalities after the 2010 Haitian earthquake and noted that 'a catastrophe does not land in a socioeconomic and political void'. Rather it lands in a social system where inequalities and disadvantage are already firmly established and these inequalities can be cemented if responders accept these inequities and operate within their constraints. Alternatively, response actions can challenge and reshape gender relations providing much-needed relief and activating equitable gender arrangements.

While the way gender is enacted can appear differently in various societies, in the context of disasters, hyper-masculinity can be accentuated and implicit hegemonic

masculinity is often reinforced (Knuttila 2016). In studies undertaken in a diverse range of disasters including the New Orleans flood disaster (Enarson 2012), floods and cyclones in Bangladesh (Rezwana and Payne 2020; Alston 2015), droughts in Australia (Whittenbury 2013) and fires in Australia (Parkinson 2019) and Canada (Drolet 2019), women and girls are shown to be particularly vulnerable in this hyper-masculine context and their vulnerability and the uneven gendered power relations that reinforce these reduce access to resources including information, leadership roles and resources. Women are more likely to be rescuing children and looking out for aged relatives and this makes them particularly vulnerable during rapid-onset events.

In studies conducted in rural Australia including the Millenium drought (Alston and Kent 2004, 2006), bushfires (Alston, Hazeleger and Hargreaves 2014), reduced water in the Murray-Darling Basin (Alston, Clarke and Whittenbury 2018) and following the Lismore floods (Foote, Alston and Betts 2024), a range of factors that impact on women during and after disasters have been exposed. These include:

- increased stress from managing off-farm or out-of-home work and increased on-farm work replacing hired labour
- financial instability that leads to women needing to work off-farm or to increase their work hours
- emotional distress resulting from financial instability
- increase in violence experienced or experiencing violence for the first time
- concern about a husband's mental health at the same time as ignoring own health
- concern for children's health and worry over education particularly when financial circumstances result in boarding schools being financially inaccessible
- a lack of accessible support services
- closure of critical services including birthing services (Dietsch et al. 2008)
- a lack of government financial and other support for women's community efforts before, during and after disasters
- burnout resulting from significantly increased voluntary work following disasters
- a lack of recognition and leadership roles for women in community preparedness and post-disaster initiatives.

Gender is a critical factor that shapes the disaster experience. The vulnerability of women and girls is recognised in research as well as in United Nation's policies and practices. As such, achieving gender equality during disaster responses is recognised as a human right and a critical approach in disaster planning and management (UN Human Rights Office of the High Commissioner 2023).

Gender equality is also recognised as a major goal (Goal 5) of the Sustainable Development Goals (UN Women 2023) because of its importance to health and wellbeing and the building of resilience. It is also included in the *Sendai Framework for Disaster Risk Reduction 2015-2030* (UNDRR 2015). In fact, gender equality in the context of climate disasters is recognised as the most significant sustainable development goal (UNDRR 2023a). The *Australian Disaster Preparedness Framework* also recognises the need for a 'gender and child-specific lens' when undertaking disaster evacuation and support (Department of Home Affairs 2018, p.13). Such international and national recognition of gender as a critical response factor, and the overt practice of gender mainstreaming adopted at international and national levels in the context of disasters, is a positive step to gender equality. Ensuring that this becomes more than a tick-a-box response at all levels, from international to local, and through all phases from preparedness to disaster rebuilding remains a work in progress.

Disaster preparedness

Disaster preparedness refers to the process of being ready for whatever disaster might occur. The *Sendai Framework for Disaster Risk Reduction 2015-2030* (UNDRR 2023a) highlights that the overall goals of preparedness actions are to reduce mortality as well as the numbers of people affected. These goals are mirrored and expanded in the *Australian Disaster Preparedness Framework*. Essentially, international and national efforts are designed to ensure communities prepare for disasters by adopting mitigation and adaptation strategies that ultimately build the resilience of both people and landscapes.

Local governments and community organisations now consider having their own disaster preparedness plans as essential. It is critical that aspects of gender are included in these plans in both the preparation for disasters and in composition of preparedness committees. Making sure they include women, men and representatives of the LGBTIQA+ community is comprehensive good practice. These bodies might also map the areas of potential vulnerability to particular events, they must address all potential infrastructure weak points and, if they do not have this already, they might create a vulnerability register. These registers collect information about households that might need additional assistance during a disaster, and this allows responders to check on them if particular. Local governments and community groups might include in their plans the sites where shelters will be opened (e.g. local school or hall) and have detailed plans on how these will be staffed and managed.

Questions to ask when formalising plans for designated shelters to improve gender inclusivity:

- Are there separate designated areas for women and children when required?

- Do people have access to sexual and reproductive health care?
- Do women living in rural and remote areas have access to health care including sexual and reproductive health care and maternity services?
- What plans are in place to ensure women and girls will to be safe?
- Are there separate toilets?
- Are there safe places for members of the LGBTIQA+ community?
- Are there confined areas for risky behaviour such as drinking and drug taking?
- Are there safe needle disposal facilities?
- Are police and emergency workers briefed about the need for 24-hour policing of shelters?
- Are pharmacists ready to provide emergency medication for people who have fled their homes with few possessions?
- How will all of this occur in a hurry?

There are significant gender consequences to adaptive measures. For example, work with families on farms uncovered that one of the central adaptive activities on farms is to source off-farm work, usually done by women (Alston, Clarke and Whittenbury 2018). This often involves a lengthy commute and, for some, the need to live away from the home during the week. This work also confirmed the increasing roles women play in on-farm work as the amount of hired labour is scaled back (Alston, Clarke and Whittenbury 2018). These gendered work role changes, together with significant advances in technology, are helping farming families to adapt to potential disasters. The increase in women's farm workload has been largely unacknowledged in this process but is one of the very evident outcomes of climate adaptation.

For families, having a disaster plan in place to be acted on when an event occurs is also a critical factor in survival. As shown in disasters such as Black Saturday, lives were lost because of the uncertainty around staying to defend property (which was the preferred position by males) and fleeing (the preferred position by females). The stay-or-go dilemma cost lives because families were conflicted about their response position. This often resulted in women and children leaving too late. As became standard practice in Canada following wildfires (Drolet 2019), families in Australia are encouraged to have disaster plans in place and important documents ready and a firm commitment to when they will leave should a disaster occur. Having a central point or a container in the home where documents (birth certificates, passports, health details, prescriptions, insurance documents, photo albums and other valuables) are stored that is ready to be grabbed in an emergency reduces stress at a later date, saves time when fleeing and reduces problems associated with proof of ownership of homes and insurance details. Family disaster plans should also include a central point where the family can regather if separated. These plans are becoming standard practice in many disaster-prone areas of the world.

Critical to survival, and as demonstrated in many disaster sites, are effective early warning systems. However, poor internet connections across rural Australia can endanger lives if warnings are not received or communication about who may need help is lost. Ensuring that warnings are given early and often is critical to saving lives, particularly for the elderly, women with young children, people living with disability and others who need time to prepare. Observations in rural areas of South Africa and with communities in Vanuatu (Alston, Fuller and Kwarney 2023) and Bangladesh (Alston, Whittenbury and Haynes 2014) show that training women in climate information services and early warning dissemination has a significant and positive outcome for the survival of women and children in these communities. It also means that women are employed at the centre of the preparedness and response.

The disaster

Disasters hit without warning and may be of a scale that has not previously been experienced. This often leads to widespread chaos, loss of life and high levels of mortality and morbidity. In this environment, rapid response is essential. Studies have indicated that a 'battle mentality' takes over (see Enarson 2012). During the Lismore floods of 2022 when the official response was delayed, men and women took to kayaks and boats to rescue other people. Research has shown that the immediate post-disaster time is very much a hyper-masculine time where a 'command-and-control' mentality is enacted (see Duncan et al. 2018) and where men are expected to be authoritative, stoic, brave and, above all, to defend their family and property (Alston 2012). The unruliness of the post-disaster space can make this difficult to achieve.

Tyler and Fairbrother (2013) refer to the 'command-and-control' mentality that takes over in extreme circumstances and note that, somewhat facetiously, that bushfires are 'men's business'. However, deciding whether to stay or go in an emergency can be a source of conflict in families (Tyler and Fairbrother 2013). This is a significant point of difference that shapes the chances of survival for those involved. The consequences of these acts can result in ongoing mental health problems and a steep increase in male suicide and suicide ideation (Alston 2012).

Critical factors that shape the gendered disaster experience in rural areas where traditional gender stereotypes persist include (for women) an increase in caring roles, increase in voluntary and paid work, issues relating to finding shelter during a disaster,

experiences of increased violence, being safe, health consequences, financial instability, greater need for paid work and outmigration. For men, the disaster can result in an increase in workloads and greater likelihood of experiencing mental health issues. These changes are likely to continue well beyond the disaster period. Further, while women are a significant part of first responder teams, they are also very active in supporting the community by setting up shelters, offering social work and welfare services, organising food, responding to the stories of survivors, keeping people safe, organising clothing and other goods and generally providing safe spaces. It is these community tasks that may be overlooked in preparation for, and analyses of, crisis responses. However, these actions provide the safety needed for people to face the trauma they have experienced.

During disasters, for those who do flee, evacuation centres provide feelings of safety and are usually established by community services organisations and local governments. They provide shelter, access to food and clothing, places to sleep and share information. However, studies from across the world and including Australia, show that shelters can be unsafe for women and children and for people who identify as LGBTIQA+. Bradshaw and Fordham (2013) and Enarson (2012) note that unsafe conditions have led to violence and rape in shelters that are not properly policed; a situation that has also occurred in Australia. There are also instances where women who have experienced violence and have protective Court Orders in place find themselves in the same evacuation centre as their perpetrator (Foote, Alston and Betts 2024). A lack of continuous policing and gender-blind administrative procedures can cause women to be unsafe in areas that have been set up to protect them.

LGBTIQA+ people may also view shelters as unsafe and fear going to them. They may feel discriminated against by people in faith-based organisations set up to assist in the recovery phase and feel excluded if registration documents required to enter the shelter do not reflect their circumstances. They may experience mental health issues from the threat of having their private lives exposed and may experience harassment in shelters and uncertain access to relief services and funds (Dominey-Howes, Gorman-Murray and McKinnon 2018).

When a disaster goes on and on as in the case of drought, there are new dynamics that shape gendered experiences. Farming families may be involved in heartbreaking and physically demanding tasks of feeding animals, destroying frail animals, carting water and coping with the devastation of watching the barren and eroding landscape die. A sense of stoicism demonstrated by men in the face of these events can have damaging effect on their mental health (Alston 2012). As a result, men are more likely to be locked into the farm and become more isolated and depressed (Zara et al. 2016) while women are more likely to interact with their community, monitor the health of their family, ignore their own health and wellbeing and work off-farm to source the income to survive (Alston 2011, p.65). In these circumstances, relationships suffer and can turn violent. For example, Whittenbury (2013) found that violence escalated in rural communities in Australia affected by drought and peaked when 3-monthly bill cycles were due.

Post disaster

International research from a diverse range of disaster sites reveals that violence against women escalates in the aftermath of disaster. This has been documented following Hurricane Katrina in the United States (Enarson 2012, 2009), the drought (Whittenbury 2013), the 2011 earthquake in Christchurch where numbers of women seeking refuge from violence in the first month after the quake nearly doubled (Lynch 2011) and the Black Saturday bushfires (Parkinson and Zara 2013). In many of these cases, women had not experienced violence in their relationships prior to the event. Similarly, in work with communities 5 years after Black Saturday, respondents reported that many relationships had broken down in the years after the disaster with several citing the issue of men being unable to come to terms with the fact that the fire had 'beaten them' (Alston, Hazeleger and Hargreaves 2018). In the post-disaster phase, international research suggests that women will have increased workloads, greater vulnerability to sexual assault and harassment and be less likely to be included in disaster management activities (Eastin 2018; Pearse 2017). Health consequences for women during and following disasters may include emotional stress and physical and sexual health effects. These are compounded by a lack of services, including birthing services for pregnant women.

There are extensive reports of declining mental health for men after a disaster. As noted by Alston, Hazeleger and Hargreaves (2019), the destabilisation of hyper-masculinity and the inability to protect their families or save homes can manifest as poor mental health and increased social isolation. This is not helped when local men are actively excluded from community clean-up operations as was the case in some communities post-Black Saturday. In these areas, the clean-up was undertaken by contractors brought into the small communities from outside the area. Local men were actively excluded from helping and this had a profound effect on men's health. Zara et al. (2016) note that men may become vulnerable through their loss of control of their circumstances, a reluctance to seek help and an internalisation of their fears for the future. Critically, in post-disaster situations where jobs and businesses may have been destroyed, men may also 'out migrate' or take jobs elsewhere. This disruption can affect a family's wellbeing and stability.

Women also report more physical ailments resulting from their farm work, particularly when women increase their work hours in dairies (Alston, Clarke and Whittenbury 2018). Increased paid and unpaid labour are part of women's post-disaster experience and all add to women's vulnerability. In commenting on post-disaster women's work and the significant expectations on women to undertake extensive community work, Bradshaw (2015, p.554) argues that while attention to women is laudatory, in the context of disasters, this shouldn't mean a transfer to a 'feminisation of responsibility and obligation'. There is extensive evidence of women setting up and managing community services, drop-in centres, food distribution and donations (our current research in Lismore following the 2022 floods demonstrates this very clearly (Foote, Alston and Betts 2024). This work is largely unpaid and often ignored despite the vital significance of the work and often leads to burnout.

Women's post-disaster work also includes active community work. For example, following the 2022 Lismore floods, women established a community hub that continues to operate providing a safe place for people to have coffee, access services and, for some, to have a safe place to spend time (Foote, Alston and Betts 2024). This raises a significant issue relating to ongoing funding. These community-led initiatives may have difficulty accessing funding, space and credibility despite the support of the community. This leads to burnout among volunteers working for their communities. Post-disaster funding should support the initiatives that are often staffed by people who have their own disaster experience. In a post-disaster situation, women and girls may also have less access to post-disaster training, less institutional support, less freedom of association and fewer positions on decision-making bodies (Alston, Whittenbury and Haynes 2014). Their responsibilities for the aged, children and the sick or injured may also increase.

Limitations

This paper may be missing the nuanced assessment of the way intersectional factors further shape experience. For example, the experiences of Aboriginal and Torres Strait Islander women during disasters remains largely undocumented. So too are the experiences of people from CALD[1] backgrounds, older women and people living with disability. Nonetheless, understanding the gendered complexities of disasters and the intersectional factors that sharpen vulnerability provides insight into the experiences of people and communities. Extending this knowledge through an examination of intersectional factors is essential. Having a comprehensive analysis of these factors means that people in Australia are prepared for the disasters that may lie ahead.

1. CALD: culturally and linguistically diverse.

Conclusion

Gender is recognised by governments, non-government organisations, researchers and community groups as a critical determinant of the disaster experience. The issues affecting women and girls, men and boys are pertinent to the shaping of resilience. In the rural and remote context, there are consequences for women and men during and following disasters. These include health consequences, both mental and physical; an increase in workloads; financial insecurity and a lack of adequate services including IT, health and other support services. Increased violence against women and relationship difficulties have been noted in rural studies across Australia. For women, there are the added burdens of additional care tasks, increased workloads and declining access to essential care such as birthing facilities and sexual and reproductive health services. Meeting the challenges posed by disasters and their aftermath requires effective leadership at the local and national levels. This leadership will be ineffectual without the inclusion of women.

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THIS REPORT IS A REPRODUCTION OF A LITERATURE REVIEW COMMISSIONED BY GENDER AND DISASTER AUSTRALIA AS PART OF A RESOURCE-BUILDING PROJECT.

Men, masculinities and disasters: a commentary

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Abstract

This paper collates and critically reviews the literature on men, masculinities and disasters in Australia and New Zealand for the decade from 2013 to 2023. It explores the relevant literature through 6 themes of the masculinist nature of emergency services and emergency services management, the influences of masculinity in preparation for disasters, the impact of disasters on men and the role of masculinity in men's post-disaster recovery, masculinity and men's violence against women in the aftermath of disasters, the challenge to binary assumptions about gender and the implications for masculinity and diverse sexual and gender identities and how masculinism frames disaster prevention and policies addressing global warming and climate catastrophes. The origins of the research into men, masculinity and disasters pre-dates the time period of this review and arises from the early gender and disaster literature that focused on the vulnerabilities of women and girls in the aftermath of disasters. This followed an era where gendered inequalities in disasters were ignored. This review focuses on contemporary analyses confined to Australian and New Zealand authors and disaster locations.

Emergency services management: an unequal gender regime

Many authors have commented on the ways in which emergency services in Australia are gendered organisations (Tyler and Fairbrother 2013; Ainsworth, Batty and Burchielli 2014; Pease 2014; Parkinson, Duncan and Archer 2019; Tyler, Carson and Reynolds 2019; McKinnon 2022). Tyler and Fairbrother (2014) note that rural firefighting and emergency management in Australia are not only structurally dominated by men, they are also culturally embedded with dominant constructions of masculinity. Pease (2014) characterised emergency services as an 'unequal gender regime' used to describe patterns of gendered inequality in specific institutions such as workplaces, government and other apparatuses of the state.

Ainsworth, Batty and Burchielli (2014) explored women's accounts of voluntary firefighting in Australia to understand the ways in which masculinities and femininities are constructed in a context where hegemonic masculinity is valorised. When women demonstrate competence and effectiveness through a demonstrated ethic of care in what is traditionally regarded as a 'masculine' occupation, they unsettle the dominant narrative that affirms men's gender identity through doing a 'man's job'. Consequently, women experience significant pushback from men through heightened displays of masculinity and aggressive, hostile, sexualised and threatening behaviours.

Eriksen and Waitt (2016) interrogated the ways in which firefighting in Australia is framed as a gendered narrative that constructs a form of firefighting masculinity that emphasises crude humour, masculine

swagger and hypermasculine bravado. It reproduces men's privilege through fostering a perceived chivalrous protection of 'women at risk' that disempowers women and reproduces gendered power hierarchies (Eriksen 2014).

Parkinson, Duncan and Archer (2019) identify the major barriers to women's leadership in emergency services organisations in Victoria. They note the mechanisms that men use, such as swearing, watching pornography, using threatening language and behaviour and excluding women from training to maintain a 'boys' club' and 'blokey' environment. The men did not see themselves as problematical or powerful or actively excluding women in spite of the evidence to the contrary. The authors recommended a Gender Equity Review Panel to monitor approval given to women for leadership training and deployment to fires and to recruit a critical mass of women recognising that 'Some women who succeed on men's terms comment that they enjoy working in a male environment, so are reluctant to see it change' (Parkinson, Duncan and Archer 2019, p.88). The authors suggest ways to overcome the 'boys' club' culture of sexism and discrimination in the services.

Tyler, Carson and Renyolds (2019) examined gender relations in the Victorian Country Fire Authority (CFA) in Australia and concluded that fire services were 'extremely gendered organisations'. Extremely gendered organisations such as the military use structure, ideology and practices of the organisation to gender all aspects of organisational functioning to construct a 'male organisation'. The authors argue that emergency services organisations such as the CFA are 'military-like' and mirror the masculinist dimensions of military organisations. This explains why bringing more women into the CFA is likely to fail to shift the cultural and structural dimensions of patriarchal control.

There are divided opinions on what progress is likely to be achieved by increasing the numbers of women in emergency services organisations that are male-dominated and culturally masculinised. Affirmative action and diversity and inclusion approaches encounter resistance and pushback from men who feel threatened by the inclusion of women in firefighting.

Masculinity and disaster preparation

There is an increased recognition that there are gender differences in preparation for disasters (Parkinson and Duncan 2013; Tyler 2013; Tyler and Fairbrother 2013; Rushton, Phibbs, Kenny and Anderson 2020; Farhall, Gibson and Vincent 2022). In relation to bushfires, research demonstrates that women are more likely to prefer 'leaving early' and that men are more likely to want to 'stay and defend' (Tyler and Fairbrother 2013). These differences lead to disagreements and conflict between and men and women about the best course of action to take during a time of fire risk. Men are perceived as being rational when it comes to making decisions and the notion of leaving early was perceived to be associated with femininity. One of the issues shaping these gender differences is the deeply embedded protector role that men take on in relation to their family, their home and their source of income. In the Black Saturday bushfires in Victoria in 2009, men's inability to fulfil that protector role led them to feeling they had failed as protectors and as men (Parkinson and Zara 2016, Rushton et al. 2020).

The personal decisions by men and women were fostered by the ways in which dominant forms of masculinity are embedded in the Australian Government policy of 'prepare, stay and defend' in response to bushfires (Rushton et al. 2020). The fact that emergency management policies are led by men, traditional stereotypes of masculinity shaped the responses of emergency services organisations to issues of physical and psychological safety (Farhall, Gibson and Vincent 2022).

Parkinson and Duncan (2013) explored the ways in which gendered norms influenced men's and women's decision-making during the Black Saturday bushfires. They noted that more women than men left early before the arrival of the fires and that few heterosexual couples had an agreed formal fire response plan. Consequently, disputes arose during the immediate crisis of responding to the fire emergency. The connection between masculinity and staying and femininity and leaving were on full display as couples negotiated their courses of action. The consequences of not having a fire response plan can reverberate between couples during and after the recovery as the process brings into question ideas about masculine protection.

Although contemporary Australian Government policy recommends the preparation of written fire response plans, there is no evidence since Parkinson and Duncan (2013) that significant numbers of heterosexual couples have prepared fire plans. Where there are no fire plans, there is potential that masculinity gendered norms in relation to courage, risk and protection are likely to prevail and could lead to increased fatalities in fires.

Gender differences in risk were also evident during the COVID-19 pandemic where men were more reluctant than women to wear masks, they did less handwashing and did not adhere as closely as women to social distancing requirements (Pease 2024). It was important for men to convey strength and being in control and to downplay the seriousness of the virus. Consequently, as well as disregarding risks to themselves, men were more likely to behave in ways that caused risk to others.

Disasters and men: masculinity and post-disaster recovery

Most of the gendered aspects of post-disaster research have focused on women's experiences of disasters. Notwithstanding the reality that the majority of men occupy privileged positions in relation to women, men generally, and marginalised men in particular, are also significantly affected by disasters (Tyler and Fairbrother 2013; Pease 2014; Rushton et al. 2020; Parkinson 2022a; Parkinson et al. 2022). However, at the beginning of this 10-year review period, there was limited information on men's experiences of disasters and their capacity to recover from them (Hazeleger 2013).

Pease (2014) argued that men's traumatic experiences of disasters can be usefully informed by the literature on deployment trauma. Drawing on the experiences of male combat veterans, men's experience of loss of control in combat was seen as a failure of masculinity. The research showed how masculinity influenced veteran experiences of, and recovery from, trauma. Pease (2014) suggested that the insights from men's experiences of deployment trauma could be used to inform the recovery process for men traumatised by disasters.

Parkinson and Zara (2016) explored the emotional and personal costs for men in the aftermath of the Black Saturday bushfires in Victoria. The major theme from their interviews with participants was to do with men's experiences of 'losing control' both during and in the aftermath of the bushfires. The men who embodied hegemonic masculinity were expected, and expected themselves, to be decisive, unemotional, stoic and courageous in the face of the fires. Some men spoke of being expected to just 'get over it' and were unable to give expression to their grief during the post-disaster period, leading some to suicide ideation. The men were rewarded for showing a veneer of strength. Research interviews revealed the respondents' experiences of high levels of alcohol abuse, drug use, depression, suicidality and an inability to acknowledge their suffering and to reach out for support. In Parkinson (2022a), 'I thought you were more of a man than that', many of the men felt they had failed to live up to the test of their manhood.

While most post-disaster research documents the differential effects of disasters on women, in the case of bushfires, men are over-represented in death-toll statistics (Tyler and Fairbrother 2013). Tyler and Fairbrother (2013) suggest that one of the reasons for men's higher rates of death may be related to the construction of hegemonic masculinity in rural areas. Pease (2014) also noted the rural context of many disasters and the construction of rural masculinities that reflect patriarchal belief systems, control of local decision-making, gendered division of domestic labour and the subordination of women in paid employment. Pease (2014) argued that locating men and masculinities in the urban-rural continuum can inform understanding of the effects of disasters on men in rural communities.

In New Zealand, Rushton et al. (2021) explored men's gendered experiences of the Kaiboura/Waiau earthquake in 2016. Drawing on the concept of 'geographies of emotion' that challenge masculinist rational and objective ways of knowing, the research showed the emotional and embodied effects of disasters on men. Rushton et al. (2021) argued that emotional experiences are neglected in disaster research where disaster scholarship has adopted a masculinist mode of analysis. Similar to research in Australia, men in New Zealand are encouraged to be strong, aggressive, reliable, stoic and calm and to avoid behaviours that could be interpreted as feminine. Consequently, acknowledgment of vulnerability and giving expression to emotions are to be avoided.

Masculinity and men's violence against women in the aftermath of disasters

In Australia, the major contribution to interrogating men's violence against women in the aftermath of disasters comes from Parkinson and Zara (2013) and Parkinson (2015, 2019, 2022b). Before undertaking research, Parkinson and Zara (2013) noted that increased violence against women by men after disasters was largely unexplored in Australia. They published the first Australian report on domestic violence in the aftermath of disasters, following research into women's and men's experiences of the Black Saturday bushfires in Victoria in 2009.

Because men were unable to live up to the societal expectations of masculinity during the bushfires, men's feelings of inadequacy and destabilising of the protector-provider role led to increased anger among men. Anger was a more acceptable emotion for men to express than distress. Even when this anger translated into violence against their female partners, this violence was excused because of what the men had experienced during the fires (Parkinson and Zara 2013).

Most of the women participants talked about either increased levels of violence after the bushfires or acts of violence against them occurring for the first time in the aftermath of the fires (Parkinson 2017). While it is not suggested that the disaster caused the men to act violently, the men's inability to acknowledge their vulnerability and the pressure to cover up their distress due to expectations about masculinity allowed the men to express anger, rage and violence specifically directed towards their partners (Parkinson 2015).

The women experiencing the violence and health professionals were compassionate towards the men because of what they had suffered. There was also concern that public acknowledgment of increased levels of violence might undermine community cohesiveness and the representation of the men as heroic in the face of the bushfires (Parkinson 2017). Prioritising the compassion for the men's suffering led to ignoring and excusing men's violent behaviours against women.

Beyond the binary: masculinity and diverse sexual and gender identities

Rushton et al. (2020) note in New Zealand, that disaster management policies foster a hypermasculine body politics (ways in which the social construction of differences are embodied) that excludes non-heterosexual bodies. Rushton et al. (2020) argued that gender and sexual minorities are further marginalised in disaster research. Gorman-Murray, McKinnon and Dominey-Hughes (2016) investigated LGBT experiences during the Brisbane floods of 2011 by exploring the interaction between masculinities and sexual and gender minority identities. The research documented the discriminatory practices that gay men and lesbians experienced when interacting with cis-gendered Australian military personnel who were assisting with recovery. Masculine, heterosexual and cis-gender privilege among responders led to increased experiences of LGBT people feeling marginalised during the recovery process.

While researchers are encouraged to acknowledge men's gendered experiences of disasters and the gendered nature of emergency management services and policy responses to disasters, increasingly, researchers raise concerns about disaster literature that compares men's and women's experiences in ways that reproduces the sex and gender binary (Rushton et al. 2019; Gaillard et al. 2021; McKinnon 2022).

Rushton et al. (2019) argued that disaster research should extend the definition of gender beyond the binary of men and women. They say that sex can best be understood as a spectrum as opposed to a binary and both gender and sex are fluid and open to interpretation rather than fixed in 2 exclusive categories. They challenge the concept of sex as physical or biological characteristics of bodies and argue that sex, like gender, is socially constructed by biological theories and dominant discourses.

Rushton et al. (2019) analysed 260 published journal articles and found that only 12 articles explored gender and sex beyond the binary of men and women and male and female. They argued for the use of the term 'SOGIESC' (sexual orientation, gender identity and expression and sex characteristics) to replace the term 'LGBTIQ+' as it was derived from a Western context. Gaillard et al. (2021) argued that the binary of men and women does not fully address the gendered dimensions of disasters because it excludes diverse gender and sex minorities. They argued that binary conceptions of gender foster compulsory heterosexuality and marginalise those who do not fit into the gender binary.

In recent years, critical studies of men and masculinity have acknowledged that masculinity as a range of behaviours and practices are not necessarily associated with male embodiment (Pease 2023). It is unclear what it would mean to conceive of masculinity outside of the gender binary and either disconnected from male bodies or only connected to the male body as one point of identification among others. Pease (2023) explored the implications of posthuman subjectivity for men, suggesting that it requires men to dis-identify with dominant frames of gender and anthropocentric privilege. He argued against men developing new forms of masculinity and encouraged men to embrace their embodiment and affective attachment to the world while moving beyond gendered subjectivity.

While this move towards inclusive approaches to gender is important to address the marginalisation of gender and sexual minorities, concern is expressed by some feminists that gender inclusivity may shift the focus away from gender hierarchy and cis-men's privilege and power. Gendered subjectivity has been important for feminist politics. It is understandable that some women will not want to give up the quest for a more positive identity when their negative identity has been a source of discrimination and oppression. Many women will be cautious of moving beyond traditional gender boundaries (Pease 2023). This is part of a wider debate about gender politics that cannot be fully explored here. The gendered experiences of cis-women and cis-men must be addressed in ways that do not homogenise gender and reproduce the hierarchal gender binary while not disadvantaging cis-women and girls.

Masculinism, climate change and disaster prevention

While gender analyses of disaster events have focused on lived experiences of disasters and involvement in emergency services organisations, Pease (2016, 2021a, 2021b, 2024) explored the links between elite men's contribution to global warming and the increased likelihood of disasters. Drawing on feminist environmentalism and critical studies of men and masculinities, Pease (2016) explored the environmental consequences of hegemonic masculinity for both the causes of, and responses to, climate change. He noted the gender differences between men's and women's ecological footprints and the greater resistance that conservative 'white' men have to addressing the causes of increased global heating. Both climate change science and environmental activism are shaped by

dominant forms of masculinity in ways that limit men's responsibility to take effective action to address the causes of environmental disasters.

Pease (2021a) challenged the move by some environmental activist scholars to construct ecological masculinities as an alternative to dominant breadwinner and eco-modern masculinities that fuel the environmental crisis (Hultman and Pulé 2018). He argued that it is masculinism, as the ideology of patriarchy, that has shaped men's exploitative and extractive attitudes and practices towards nature that creates environmental crises. Pease (2021a) reaffirmed materialist ecofeminist analyses to challenge essentialist notions of femininity and masculinity that suggest feminine principles that are more caring towards nature. Instead, he argued that it is important to reject masculinity as an identity for men and to foster an 'ethic of care' in men that breaks the gender division of care between men and women and encourages men to do emotional care work, practice empathy, become vulnerable and develop solidarity with women and to open up to emotional connections to nature and all living beings.

Pease (2021b) argued that a gendered analysis of disasters must challenge the sense of invulnerability, rationality and autonomy embodied within men that encourages arrogance, dominance and control and exploitative and extractive relations with nature. Consequently, to address the causes of environmental disasters, men must develop embodied, affective and entangled subjectivities that enable greater affinity and compassion for humanity and the planet.

Pease (2024) analysed how a masculinist mindset contributed to the COVID-19 pandemic and limited the public policy responses to mitigating its risks. Male-dominated governments and corporations managed the pandemic through anthropocentric responses to the natural environment and uncontrolled consumption patterns. The masculinist mindset was incapable of seeing connections between pandemics, the crisis of global warming, environmental disasters and the destruction of animal habitats. Masculinism was evident in responses to the pandemic that prioritised individual freedom and the economy over community health and wellbeing and care for vulnerable members of communities. Pease (2024) advocated a reimagining of public policy responses to pandemics by underpinning public life, governance and relationships with non-human others by a feminist ethic of care.

Conclusion

This review of a decade of research and literature from Australia and New Zealand showed that masculinism, hegemonic masculinity, male dominance and power permeate emergencies and disasters. These gendered dynamics have consequences for understanding disasters, for preparing for them and responding to them and to recovering from events that cause upheaval for individuals and communities. More importantly, this review suggests that we need to reimagine our policy responses to the causes of disasters by addressing the masculinist approach to our relationship with the environment and recognising our human entanglement and interdependence with nature.

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THIS REPORT IS A REPRODUCTION OF A LITERATURE REVIEW COMMISSIONED BY GENDER AND DISASTER AUSTRALIA AS PART OF A RESOURCE-BUILDING PROJECT.

Aboriginal and Torres Strait Islander peoples, gender and disaster: a commentary

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Melbourne University

Abstract

This paper summarises research on issues related to women, men and people of diverse gender and sexual identities within Aboriginal and Torres Strait Islander communities when they are involved in emergencies, disasters and extreme weather events.

As the oldest continuous culture on the planet, Aboriginal and Torres Strait Islander peoples have much to teach about survivance in a rapidly changing world.
(Watego et al. 2021, p.9)

Introduction

The experiences and knowledges of Aboriginal and Torres Strait Islander peoples have historically been largely ignored in the field of emergency and disaster management in Australia. Extreme events and subsequent recovery reflect and exacerbate social inequities (Kennedy et al. 2022; Quinn et al. 2021a; Rogers et al. 2021) and these effects are magnified by historical, inter-generational and cultural trauma that originates from a history of colonisation, dispossession and systemic racism (Savage and Williamson 2021; Williamson, Markham and Weir 2020). The effect of extreme events on Aboriginal and Torres Strait Islander communities in Australia is unique due to their distinct demographic profile, culture, strong ties to family and community as well as deep relationships with the land. Yet people in these communities are often silenced, local community engagement is minimal and recovery efforts lack aspects of cultural safety and sensitivity.

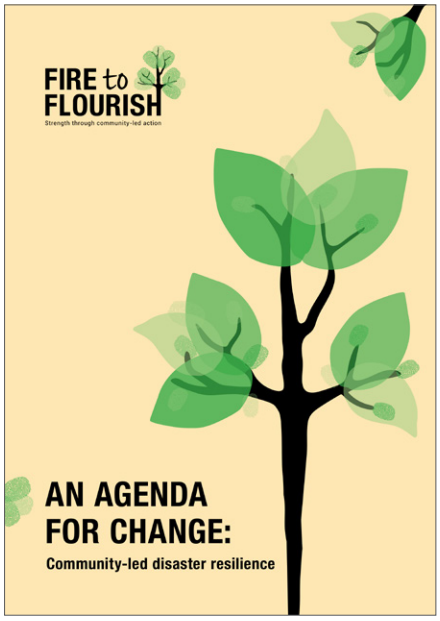
While there is a severe gap in the literature regarding disaster, Aboriginal and Torres Strait Islander peoples and gender, there is a growing consensus on recommendations for:

- recognising historical trauma and resilience
- prioritising and supporting Aboriginal and Torres Strait Islander voices and leadership
- sharing decision-making
- embracing Aboriginal and Torres Strait Islander knowledge
- recognising restorative power of cultural healing frameworks
- promoting cultural fitness
- addressing systemic racism
- acting beyond listening
- advancing resilience and equity.

To ensure a just and resilient future, it's vital to incorporate Aboriginal and Torres Strait Islander voices, knowledges and leadership into emergency and disaster planning and recovery. The goal of risk reduction should be to empower communities to withstand and thrive after disaster events. These events can be catalysts to address decolonisation and climate change by embracing Aboriginal and Torres Strait Islander peoples' strategies and the transformative lessons they offer.

Method

There is a growing body of literature about Aboriginal and Torres Strait Islander peoples and emergencies and recovery. Terms in academic literature include 'disaster' and 'Aboriginal and Torres Strait Islander/ Indigenous/First Nations'. Within this is a search for gender or sexual-orientation specific data (women, men, sistagirls, brotherboys, transgender, LGBT). Because there is scant academic literature with a



An Agenda For Change: Community-led disaster resilience provides an agenda for community-led recovery processes that improves resilience and wellbeing, particularly for communities experiencing entrenched disadvantage.

gender focus, a second search explored data related to Aboriginal and Torres Strait Islander women and domestic violence and mental health. The focus for this literature review was on Australia's Aboriginal and Torres Strait Islander peoples, however, the search included relevant data from overseas.

> *There is a great opportunity for Aboriginal-led approaches to address disaster risk that would also benefit the whole community.*
> (Matthews et al. 2020, p.15)

Aboriginal and Torres Strait Islander peoples overlooked in disaster preparation and recovery

The experiences of Aboriginal and Torres Strait Islander peoples have been largely overlooked in disaster recovery in Australia (Savage and Williamson 2021; Quinn et al. 2021a). In the aftermath of the Australian Black Summer bushfires in 2019–20, Quinn et al. (2020), Rogers et al. (2021) and Williamson, Markham and Weir (2022) showed that Aboriginal and Torres Strait Islander communities were largely ignored and marginalised in vital fact-finding and policymaking meetings. This disregard extended to response and recovery programs run by external organisations (Rogers et al. 2021) where Aboriginal and Torres Strait Islander knowledge about coping with and recovering from disaster events had been overlooked (Radel, Sukumaran and Daniels 2023). The bushfires left an indelible mark on Australia's history with a vast expanse of destruction that affected many communities. For Aboriginal and Torres Strait Islander communities, the land isn't just a place of residence. It is deeply intwined with their cultural and spiritual identity. Consequently, their bushfire experience is characterised by unique challenges and traumas as detailed by Williamson (2022a):

- Disproportionate effects on communities in terms of population and the profound emotional and cultural loss associated with the devastation of ancestral lands.
- The response of Aboriginal and Torres Strait Islander communities and their organisations exhibited remarkable unity, resilience and strength. They undertook evacuation efforts, offered immediate relief and took measures to protect their heritage and cultural values.
- Cultural insensitivity in relief efforts showed the pressing need for a culturally sensitive disaster management framework with community-controlled and representative Aboriginal and Torres Strait Islander organisations in emergency management, response and recovery playing a central role.
- Trust deficit between Aboriginal and Torres Strait Islander communities and relief agencies has long-term implications and underscores the need for culturally sensitive response mechanisms.

Williamson (2022a, p.1) emphasises '…the importance of community-controlled and representative Aboriginal and Torres Strait Islander organisations in emergency management, response and recovery in future disasters'.

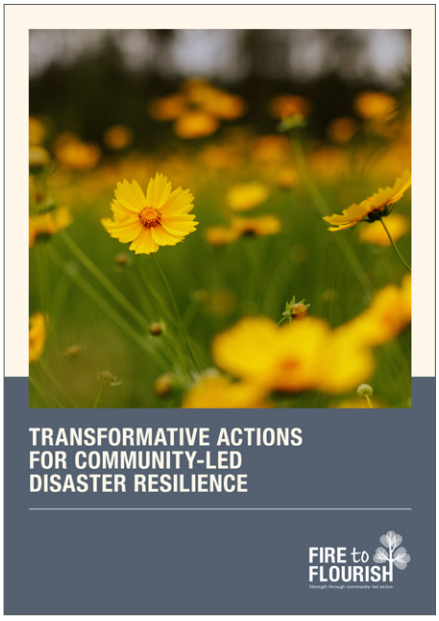
Disasters compound social inequities and are opportunities for social justice

The World Health Organization has highlighted that inequities experienced by Aboriginal and Torres Strait Islander communities in Australia, compared to other population groups in Australia, are the most significant inequities in the world (Heris et al. 2022). Disaster events and subsequent recovery mirror and exacerbate these social inequities (Kennedy et al. 2022; Quinn et al. 2021a; Rogers et al. 2021) and disaster effects are magnified by historical, intergenerational and cultural trauma stemming from colonisation, dispossession, and systemic racism (Kennedy et al. 2022; Rogers et al. 2021). Government policies, programs and institutional responses that fail to recognise and uphold Indigenous rights and that disregard the capacity of Indigenous knowledge in social and environmental recovery further contribute to systemic racism and marginalisation that compound and contribute to vulnerability of Indigenous groups (Howitt, Havnen and Veland 2012) According to Havnen and Veland (2012), Indigenous rights and actions that disregard Aboriginal and Torres Strait Islander knowledge in social and environmental recovery contributes to systemic racism

and marginalisation that compounds and contributes to vulnerability. Recovery that lacks cultural competence and sensitivity poses additional risks of aggravating Aboriginal and Torres Strait Islander peoples' traumas (Quinn, Williamson and Gibbs 2021; Williamson, Markham and Weir 2020). These issues themselves produce vulnerability when it is the systems that must be fixed (Quinn et al. 2021b).

The legacy of colonisation has fostered mistrust in governments and mainstream services among Aboriginal and Torres Strait Islander peoples who may consequently avoid seeking assistance during disasters, heightening their risk (Heris et al. 2022; Savage and Williamson 2021). Quinn et al. (2021b) highlighted that in the recovery process, service organisations frequently fail to provide culturally safe environments. The structures themselves, predominantly non-Indigenous, may perpetuate colonial oppression symbolically, and the service providers may lack cultural sensitivity. For example, during the 2019–20 bushfires, evaluation done by the NSW Government (2020) and Keating et al. (2022) showed that some Aboriginal and Torres Strait Islander peoples felt unwelcome at evacuation centres and, in some cases, support services were reluctant to provide immediate relief. The experience of evacuation reminded Elders of historic actions by governments that displaced Aboriginal communities and carried out the forced removal of children from their families (Keating et al. 2022).

Disasters can be catalysts to address issues of decolonisation and climate change through Aboriginal and Torres Strait Islander perspectives and resilience. The strength of Aboriginal and Torres Strait Islander communities in the face of persistent marginalisation is an asset in recovery efforts (Quinn et al. 2021b). The ultimate objective of disaster risk reduction should be to understand and enhance the capacity of Aboriginal and Torres Strait Islander communities to withstand the severity of a disaster and then to thrive and flourish in its aftermath (Rogers et al. 2021; Williamson, Weir and Cavanagh 2020).



Transformative Actions For Community-led Disaster Resilience proposes six actions for putting community-led disaster resilience into practice.

Unique effects on Aboriginal and Torres Strait Islander peoples in Australia

The effect of disasters on Aboriginal and Torres Strait Islander peoples is exceptional in several aspects due to their distinct demographic profile, culture, strong ties to family and community, and unique relationship with the land.

Demographics

Savage and Williamson (2021) state that Aboriginal and Torres Strait Islander communities have a predominantly young population and are especially vulnerable to long-term disaster effects. Children and youth make up the majority of those affected (Williamson 2022c). Attention is needed for people in hostels, detention centres, aged care residences, town camps and people experiencing homelessness (Department of Health and Aged Care 2020). Events like floods and bushfires can disproportionately affect Aboriginal and Torres Strait Islander peoples (Williamson 2022b). For example, despite Aboriginal and Torres Strait Islander peoples being 3.3% of Australia's population (in 2020), they account for 6.2% of flood-affected individuals outside Sydney (Williamson 2020c).

Culture and strong family and community ties

Extensive documentation cited by Kennedy et al. (2022) highlights that culture and strong family and community ties serve as essential strengths and protective factors for positive mental health and wellbeing among Aboriginal and Torres Strait Islander people in Australia. In addition, according to McLennan (2015), these relationships appear vital to the mitigation of risk and adversity and the sense of wellbeing within communities. Conversely, this closeness acts as a risk factor in that the tighter knit a community is, the more susceptible it might be to experiencing harms to its members (Matthews et al. 2019). This provides insight into why Aboriginal and Torres Strait Islander peoples experience heightened risks of disruption to their supportive close social connections and support when their communities undergo significant upheaval (Matthews et al. 2019). Six months after floods in 2017 in the Northern Rivers region of New South Wales, Matthews et al. (2019) found that respondents of Aboriginal and Torres Strait Islander background were significantly more likely to report probable anxiety and depression. Similarly, a study

Table 1: Healing-informed disaster recovery support for Indigenous (and all) communities.

Approach	Methods
Holistic approaches to wellbeing	• Holistic understanding of post-disaster wellbeing, encompassing people, lands, waters and non-human beings. • Spiritual, cultural and social recovery strategies (e.g. artistic expression and storytelling).
Social rather than solo processes	• Strategies that simultaneously support individual and community healing (e.g. group activities, community events and storytelling therapies). • Frameworks and resources that are inclusive of and culturally relevant to Indigenous peoples.
Identifying and treating the roots of trauma	• Understanding of how personal and community contexts (e.g. intergenerational trauma and previous disasters) intersect with disaster recovery. • Embrace of systemic change (e.g. for decolonisation and climate justice) as a legitimate part of recovery processes.
Strengths-based and community-led processes	• Grassroots disaster recovery initiatives that are culturally and socially specific to each community or person. • Strategies for evaluating intervention approaches that are flexible, diverse and dynamic by design.
Socially and culturally friendly spaces	• Prioritisation of culturally safe and inclusive community recovery spaces during and after disasters.
Indigenous notions of responsibility, justice and forgiveness	• Alternative models for responding to post-disaster family violence. • Highlighting personal agency alongside attention to systemic issues after disasters.

Table adapted from image in Quinn, Williamson and Gibbs (2022a).

by Kennedy et al. (2022) that focused on the effects of the COVID-19 pandemic on Aboriginal and Torres Strait Islander parents, showed heightened levels of anxiety, depression, loneliness and, in some cases, suicidal thoughts and self-harm were reported; these emotions were largely linked to the sense of isolation from friends and family reported by participants. It was also reported that new mothers found the lack of connection challenging when family could not be present at the birth or in the home afterwards (Kennedy et al. 2022).

Unique relationship with Country

> *I've watched in anguish and horror as fire lays waste to precious Yuin and, taking everything with it - lives, homes, animals, trees - but for First Nations people it is also burning up our memories, our sacred places, all the things which make us who we are.*
>
> (Allam 2020, para.11).

Disasters that affect Country directly affect the health and wellbeing of Aboriginal and Torres Strait Islander peoples (Savage and Williamson 2021). As noted in Quinn et al. (2021a), 'these experiences can be particularly profound due to the deep connections between land, culture, history, colonisation and identity' (p.10). In the Aboriginal-led study by Kennedy et al. (2022), it was reported that during the COVID-19 pandemic, the 'disruption to cultural practice, and disconnection from Country, family and community was detrimental to wellbeing' (p.1). Research in Australia and overseas has demonstrated that for First Nations peoples, healing from trauma, whether historical or contemporary, is a cultural and spiritual process and is inherently tied to land (Williamson et al. 2020).

A healing framework for disaster recovery

The research points the way towards culturally appropriate, place-based, strengths-based and community-based pre- and post-disaster planning and recovery (Atkinson 2022; Foote et al. 2023; Graham et al. 2022). Aspects of culture need to be viewed and treated as a 'core underlying positive determinant' (Department of Health and Aged Care 2020, p.6). Culturally led solutions are vital and effective for the social and emotional wellbeing of Aboriginal and Torres Strait Islander communities and these approaches can benefit the whole-of-population system (Matthews et al. 2020).

Aboriginal and Torres Strait Islander leadership, culture and knowledge should be at the forefront of emergency responses including pre- and post-disaster planning, policy and recovery (Williamson 2022c) as seen in Table 1.

What has worked?

During the pandemic, high levels of financial and social support were emotionally and financially helpful, including access to food banks and food deliveries (Kennedy et al. 2022).

An analysis post 2017 Northern Rivers floods by Matthews et al. (2020) found that among Aboriginal respondents only, higher social media engagement was associated with lower levels of ongoing distress and probable PTSD. Similarly benefits of digital technologies and telehealth support were reported during the pandemic (Kennedy et al. 2022).

Involvement of Aboriginal and Torres Strait Islander leadership and the integration of culturally informed strategies not only mitigates the risks of COVID-19 effects but contributes to long-term improvements in public health outcomes for people in these communities. This approach could also be applicable to disaster recovery (Crooks, Casey and Ward 2020).

Although 7 in 10 Aboriginal and Torres Strait Islander women seek help for their mental health concerns, they tend to rely more on telephone hotlines, online counselling and online resources, as well as support groups and school counsellors for those in school or university (Liptember Foundation 2022).

Recommendations

Shared decision-making is required between government bodies and Aboriginal and Torres Strait Islander peoples in the full range of planning and implementation of disaster risk management (Department of Health and Aged Care 2020; Williamson, Markham and Weir 2020). Aboriginal and Torres Strait Islander peoples need to be explicitly involved in decision-making processes regarding their social, cultural and spiritual wellbeing on Country, underpinned by their custodian obligations (Keating et al. 2022).

Responses should be based on the best possible evidence and data inclusive of Aboriginal and Torres Strait Islander peoples (Department of Health and Aged Care 2020; Michaels Tofa and James 2016).

Investment in research that explores the intersections of gender, disaster effects and Aboriginal and Torres Strait Islander communities should be increased. This includes gathering data on the experiences of Aboriginal and Torres Strait Islander women and gender-diverse individuals during disasters to inform more targeted interventions and policies.

Recognise that racism, sexism and colonisation are drivers of higher rates of violence against Aboriginal and Torres Strait Islander women. Studies should consider how disasters exacerbate these drivers, leading to increased violence against Aboriginal and Torres Strait Islander women. Strategies should address these systemic issues and promote social justice.

Consult with local Traditional Owners and other community members to create diverse opportunities to protect, restore and connect with nature. Attention should be paid to appropriate engagement with places of particular significance to Aboriginal and Torres Strait Islander peoples (Quinn et al. 2021a).

Prioritise supports for Aboriginal and Torres Strait Islander peoples to remain on Country (Quinn et al. 2021a).

Consider the individual, collective and historical trauma effects in future public health emergency responses using an overarching philosophy of cultural humility, safety and responsiveness (Kennedy et al. 2022).

Formalise 'Caring for Country' as a holistic resilience practice supported by a national Indigenous disaster resilience and climate adaptation framework (Keating et al. 2022).

The Australia Institute for Disaster Resilience 'Working with Indigenous Communities in Recovery' toolkit (AIDR 2022) provides specific ways to implement many of the aforementioned recommendations in recovery centres such as publicly acknowledging the local Traditional Owners of the land the centre is located on; creating a separate and safe space for Elders; having adequate facilities for families with children and babies; inviting local Aboriginal and Torres Strait Islander representatives to be present in evacuation and recovery centres and providing staff and volunteers who will be working in evacuation and recovery centres with cultural-safety training.

Other options include using everyday language as well as the use of Indigenous art in the planning and recovery phases that can be a 'powerful healer for community expression of grief and hope after disaster' (AIDR 2022).

Conclusion

This literature review underscores the need to address challenges faced by Aboriginal and Torres Strait Islander peoples in Australia during disasters. It emphasises recognising historical trauma, promoting Aboriginal and Torres Strait Islander leadership and integrating this knowledge into emergency and disaster management. It highlights the intersection of gender, disasters and Aboriginal and Torres Strait Islander communities, emphasising the need for research on the specific experiences of Aboriginal and Torres Strait Islander women and gender-diverse individuals. Addressing violence drivers like racism and sexism is crucial for social justice. The importance of culture, family and community ties, which can both protect and challenge during disasters is also emphasised. Recognising the relationship between Aboriginal and Torres Strait Islander communities and Country is vital for culturally appropriate recovery. The recommendations listed offer guidance for policymakers, organisations and researchers to support Aboriginal and Torres Strait Islander communities in risk reduction and recovery. Prioritising shared decision-making, Aboriginal and Torres Strait Islander knowledge and cultural safety is

essential as well as offering a framework that will benefit all. This review stresses valuing Aboriginal and Torres Strait Islander people's resilience, strengths and cultural heritage and prioritising their leadership in disaster recovery for more just and resilient communities.

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THIS ARTICLE IS A SUMMARY OF A REPORT COMMISSIONED BY GENDER AND DISASTER AUSTRALIA.

The socio-economics of gender and disasters

Disasters do not discriminate, but our society does, leading the effects of disasters to reverberate unequally, magnifying existing vulnerabilities and disparities. The report explores the issue of gender, disasters and socio-economics, providing insight into the intersectionality of gender and economics within the Australian context.

The socio-economics of disasters

Disasters are not experienced uniformly across society. Rather, the underlying socioeconomic conditions, norms, disadvantages and inequalities that existed prior to disasters are major factors in an individual's pre-existing level of financial and economic security. Unequal distribution of power and positions of influence along gendered lines can also erode the subsequent degree of agency and influence that individuals have over decisions that influence their lives and livelihoods. Protective factors that enhance an individual's economic resilience include a secure income, access to savings or credit, employment with social protection, marketable job skills, education and training, and control over productive resources.[1] These factors not only help individuals prepare for disasters, but also influence their subsequent ability and time it takes to absorb, cope, respond and recover from disaster shocks.

The next section describes some broad trends and conditions for women, men and gender diverse peoples. It highlights the systemic factors that have contributed to gender-based discrimination and inequality over time. While this is true at a cohort level, it is important to note that this does not necessarily always reflect the experiences of individuals within each cohort, nor fully capture the intersectionality of gender with age and other attributes and dimensions of identity, such as Indigenous identity, disability, cultural and migrant background, household circumstances and socioeconomic background – all of which may add or detract from their individual economic resilience within and across the gender spectrum.

Gendered experiences

Women

Consistent with international experience, being a woman is associated with lower levels of economic resilience to disasters in Australia, particularly in comparison to men. This is due to a variety of interconnected factors, including gender inequality, socio-economic and power disparity, and access and control over resources.

While there have been significant increases in women's labour force participation and earnings over the last few decades, the gender-patterned nature of the workforce's industry of employment has a direct bearing on women's earning potential. Historically, male-dominated industries sit in the upper half of the average earning spectrum, while the average earnings in many industries that are large employers of women are in the lower half of the earnings spectrum.[2] The historic undervaluation and gendered associations with the care economy, in which women are over-represented, also add to gender differentials in workforce outcomes.[3]

1. Shi H and Jin E (2022, December) 'Valuing the costs of natural disasters using the life satisfaction approach. Victoria's Economic Bulletin, 6(4).
2. KPMG (2022) She's Price(d)less: The economics of the gender gap, https://assets.kpmg.com/content/dam/kpmg/au/pdf/2022/kpmg-shes-priced-less-2022.pdf
3. The Senate, Finance and Public Administration References Committee (2017) 'Gender Segregation in the Workplace and Its Impact on Women's Economic Equality,' Parliament House, June 2017, accessed April 2023, www.aph.gov.au/parliamentary_business/committees/senate/finance_and_public_administration/gendersegregation/Report.

Women are also more likely than men to work in part-time positions, accounting for 68.5% of the part-time workforce in 2022.[4] Women's choices to participate in the labour force, and the extent of their participation, are inherently constrained by the unequal distribution of care-giving within society.[5]

Women also overwhelmingly head one parent families with children and dependants, with the ABS Census 2021 reporting 79.8% of single parents being female.[6]

Females are also more likely to be carers for people with disability. For example, the ABS 2018 Disability, Ageing and Carers, Australia survey found that while prevalence of disability was similar for women (17.8%) and men (17.6%), 7 in 10 (71.8%) primary carers were women.

Cumulatively, these factors reduce women's capacity to prepare for, and manage the financial impacts of a disaster. With less access and control over economic resources, women face hindrances to recovery and longer-term resilience.

Men

Men as a group broadly have relatively greater financial security and more power in decision making which support economic resilience to disasters. However, they also represent a greater proportion of people experiencing homelessness (56%) and more likely to be living in improvised dwellings, tents, or sleeping out compared to females of all ages.[7]

They can also be vulnerable in disasters due to gender social norms and expectations. Hyper-masculinity norms can reinforce their role as 'provider and protector', heightening their exposure to hazards in work and disaster contexts, and normalising risky behaviour.[8,9] Hyper-masculine norms can also lead to self-destructive coping strategies (including interpersonal violence and substance abuse) during disasters and create barriers to asking for help, which inhibit recovery from trauma. These have important implications on their ongoing ability to participate and engage in the workforce. Cumulatively, this affects the longevity and quality of their life and wellbeing.

Gender diverse peoples

Historical discrimination and disadvantages experienced by LGBTIQA+ communities have created ongoing barriers to housing, participation in educational and economic opportunities and willingness to access official essential services and supports.[10]

While official data is limited,[11] a recent study involving almost 7,000 LBTIQA+ people living in Australia (6,835) found relatively higher rates of poverty and homelessness compared to the general population. Almost a third of participants (31.3%) reported an income of less than $400, which is below the Australian poverty line for single person ($411.38, excluding housing[12]). Homelessness was a significant experience. One in five (22%) of participants reported having ever experienced homelessness, including almost one in three trans and gender diverse people.

Such socioeconomic conditions are known to erode individual financial and economic resilience to disasters.[13]

Policy implications and considerations

Our literature review has confirmed that disasters can and do have profound and long-lasting socioeconomic impacts on communities, which can vary by gender.

However, these impacts and consequences are not inevitable. Local and national socioeconomic policy responses can support more gender-inclusive and responsive approaches to aid long-term disaster recovery and resilience, and contribute to lessening (or at least, not widening) the pre-existing gender inequities that are often disproportionately borne by those already living on the margin.

This article was commissioned by Gender and Disaster Australia and written by an anonymous organisation. The full report, including references, can be found at https://genderanddisaster.com.au/resources

4. Ibid.
5. Preston A and Yu S (2014) 'Is there a part-time/ full-time pay differential in Australia?', *Journal of Industrial Relations*, 57(1):24–47.
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7. Australian Bureau of Statistics (2023) Estimating Homelessness: Census. ABS website www.abs.gov.au/statistics/people/housing/estimating-homelessness-census/2021.
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12. Melbourne Institute (2022, March) Poverty Lines: Australia. The University of Melbourne. https://melbourneinstitute.unimelb.edu.au/__data/assets/pdf_file/0007/4222195/Poverty-Lines-Australia-March-2022.pdf
13. See discussion in Chapter 2: Indicators of: Parsons M, Reeve I, McGregor J, Morley P, Marshall G, Stayner R, McNeill J, Glavac S and Hastings P (2020) The Australian Natural Disaster Resilience Index: Volume II – Index Design and Computation. Melbourne, Bushfire and Natural Hazards CRC.

Sources of resistance and success: gender justice in emergency management around the world

Dr Debra Parkinson

Executive Director
Gender and Disaster Australia

We've yet to figure out all the sources of resistance to gender justice and so I fear "we" are just passing it along to the next generation….along with climate chaos. Political work is at the core of both struggles and women can lead the way.

(Elaine Enarson, Independent Scholar, Colorado, United States of America (Personal Communication, 27 April 2024))

Introduction

For this edition of the *Australian Journal of Emergency Management*, Gender and Disaster Australia (GADAus) explored factors and influences that affect diverse genders within emergency management – either increasing or reducing inclusion for these groups. There are harmful consequences when emergency management planning is not inclusive of women and non-binary people and, therefore, not representative of communities.

To this end, I invited international colleagues to offer their ideas for how to improve and diversify the sector so that it may be fairer for women (while increasing the capacity of the emergency management sector). They were also asked to offer observations of successful initiatives working well to improve disaster risk reduction for women in their countries.

The women I asked are leaders in this important field of inquiry and have rigorously engaged with questions of gender and disaster/emergency management for years. I asked women, because, at this time in history (2024), the number of women killed by men in Australia has doubled in the first 4 months of the year. In the US, one state after another retracts and denies women's rights to abortion following the overturning of Roe Vs. Wade on 24 June 2022 (Totenberg and McCammon 2022). Let's hear women because change after disasters can be progressive or regressive. The last weekend in April 2024 saw thousands of women, men, non-binary people and children join protests right across Australia to demand an end to violence against women. In this moment, real and progressive change is possible.

The same moment hangs in the balance for climate change and what it means for the world's climate change canary, Australia. Floods have ravaged large parts of the country in Queensland, New South Wales, Victoria and Western Australia. Residential areas have been hard-hit and homeowners face the prospect of not being able to insure their property (Davis 2024). Reports by the Insurance Council of Australia[1] read like trailers for apocalyptic films, and many look to the 2024–25 bushfire season with trepidation. Memories of the Black Summer bushfires in 2019–20 are seared into the collective consciousness, unprecedented in the damage wrought to our country. First Nations people's sorrow is yet to be fully acknowledged. The gendered effects of disasters (complex, cascading and compounding) remains unrecognised.

This paper presents initiatives from other countries that are deemed worthy by women who understand emergency management. There are ways to be fair and just to women within emergency services organisations and ways to be fair and just to women who survive disasters and receive the services of emergency services organisations. Philosopher and feminist Mary Wollstonecraft said, 'It is justice, not charity that is wanting in the world' (Wollstonecraft 1792). I commend these initiatives to emergency management decision-makers.

1. Insurance Council of Australia, at https://insurancecouncil.com.au/about-us/.

Benefits of integration

The ideas documented here aim for justice for women in the emergency management realm and will increase any nation's capacity to meet the challenge of increasing extreme weather events we now face. The concept of the 'disaster cycle' of prevent, prepare, respond, recover is disrupted as one disaster follows on the heels of the previous one before people have a chance to recover. The scale of the problem is clear, yet it only increases the tendency of emergency managers to dismiss calls for gender justice. As Elaine Enarson recognised their response can be characterised as, 'Don't talk to me about gender, I have a disaster on my hands!' (Parkinson, Zara and Davie 2015, p.26).

The initiatives outlined are evidence that addressing gendered issues will help to address the challenges within emergency management as it now exists. If women and non-binary people are included in emergency management planning and frontline response roles, the capacity of the sector will surge. The volunteer base for fire and emergency services has been declining for a decade and a primary reason is that macho culture prevails and this alienates groups that don't align. Women, non-binary people and people from other marginalised groups are often left aside or actively mistreated. This is to the detriment of the emergency services sector and their communities. A gender-inclusive culture will increase the capacity of the sector by drawing on a greater and more diverse group of people. The following initiatives are generously offered from the United States, the United Kingdom, Canada, Iran and Sweden.

United States of America

Lori Peek, Professor, Department of Sociology and Director of the Natural Hazards Center, University of Colorado Boulder

(Personal Communication, 30 April 2024)

The U.S. emergency management profession, as well the field of hazards and disaster research, were dominated by white men for decades (Anderson 1990). This tide turned, however, in the 1970s and 1980s as structural barriers began to weaken and more women entered higher education and the workforce. Today, women make up about 33% of all emergency management directors in the United States (Data USA 2023) and 52% of self-identified social science disaster researchers (Peek et al. *2020a).*

Increased representation of women in emergency management and disaster research matters for many reasons—perhaps most importantly because demographically and functionally diverse teams are better equipped to make critical decisions (National Research Council 2014; Peek et al. *2020b). It is therefore essential that we continue to ensure that women and other members of historically underrepresented groups are encouraged to become emergency managers and disaster researchers, socially supported in their degree programs and professional positions, and paid equally for their work.*

Women who reach the highest levels in emergency management agencies and academia are now paving the way for the next generation of leaders, which will greatly benefit the continued diversification of the workforce. Consider, for example, that when Deanne Criswell was appointed Administrator of the U.S. Federal Emergency Management Agency (the first woman to ever assume the role) she ushered in a new era that includes more women in the agency's top leadership positions than at any other point in its nearly 50-year history. As another example, more women are now establishing and leading academic hazards and disaster research careers and institutes across the nation. Change is possible. But it takes focus, leadership and a commitment to organizational change.

United Kingdom

Maureen Fordham, Professorial Research Associate in Gender and Disaster, Centre Director, IRDR Centre for Gender and Disaster, University College London

(Personal Communication, 30 April 2024)

Making emergency management fairer to women includes understanding and applying intersectional approaches to allow for the diversity in those whom emergency management serves. For example, a simplistic and homogenous characterisation of 'women' may miss the particular needs of older women (who may have been singularly characterised or triaged as 'elderly') without recognising the specific needs of elderly women as having fewer financial resources and more often living alone, which can limit capacities to act in emergencies, may lead to undiagnosed heart conditions (more common in women), among other concerns. Similarly, a trans woman may have particular needs related to sexual and reproductive health, psychological impacts through experienced stigma or loss of dignity through inadequate sanitation facilities. Seeing the whole person in context is important to know what questions to ask someone or which facilities to prepare, to avoid exacerbating an already stressful situation. There are likely to be common consequences which can be prepared for and which will respond to the needs of diverse social groups. A new initiative in the UK between University College London's Centre for Gender and Disaster and Public Health Wales Emergency Preparedness Resilience and Response is exploring in what ways equalities and equities issues are experienced and embedded in everyday practice and policy.

Within emergency management itself, it requires a scaling up of female representation at all levels but especially in higher levels of management and leadership. It is not sufficient to include a token female representation when there needs to be a critical mass of feminine (or feminist) attitudes and values to counterbalance the overwhelming dominance of masculine culture in the profession if it has become detrimental or toxic.

Canada

Lorraine Greaves, Principal, Galvanizing Equity Group Inc and Senior Investigator, Centre of Excellence for Women's Health

Nancy Poole, Director, Centre of Excellence for Women's Health and Principal, Galvanizing Equity Group, Canada

(Personal Communication, 30 April 2024)

It is crucial to consider what the sex/gender dynamics are in responding to an emergency. For all groups, sex and gender factors interact with each other and the environment to create different vulnerabilities to risk and hazard, mental and physical health, diseases and conditions. These vulnerabilities can be amplified in some neighbourhoods, social contexts, settings and occupations. Behind this, ongoing sexism, racism, colonialism and ableism stream into the mesh of the overarching responses to emergency situations creating replications of injustice and inequity. Canada mandates the use of sex and gender-based analysis plus (SGBA+) approach in federally funded initiatives to assess how all of these factors affect policies and actions, such as emergency response plans. Simple sex/gender data disaggregation to provide guidance for service provision and products is one result. Similarly, creating specific evacuation plans for women in domestic violence shelters to preserve their safety and privacy in crises such as fast-moving fires could respond to a gender analysis.

Unfortunately, SGBA+ analyses are not tracked nor enforced by the federal government and similar policies do not exist at provincial and municipal levels. Nevertheless, the key opportunity lies subsequent to this integration. Real progress will result if the focus of emergency response is a gender-transformative approach that responds to emergencies and improves gender equity at the same time. In this way, responses can consider the issues raised by SGBA+ and also incorporate shifts in approaches that reduce inequities.

This challenge needs to infuse the education and training of responders, response planning and policy development and implementation. This higher bar will help reduce the collateral of emergencies such as exposure to disease, enhanced poverty, precarious housing, unmet health needs and the perpetuation of domestic violence. When gender transformative solutions are sought, overall health, particularly women's health, the health of sexual and gender minorities and other vulnerable groups is enhanced. This approach will help build a resilient emergency response system that contributes to social justice and better health for all.

Iran

Sanaz Sohrabizadeh, PhD, Associate Professor, School of Public Health and Safety, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

(Personal Communication, 27 April 2024)

Gender-based emergency management has been an important issue in developing countries such as Iran. For instance, the Global Gender Gap Report 2023[2] ranked Iran as 143 out of 146 countries. That is, the gender gap is a considerable challenge in Iran as a highly disaster-prone country where people have been affected by frequent catastrophic disasters so far. Iran benefits from one of the most effective primary health care systems in the world. The primary health care network has been widely distributed in all rural and urban regions and applies a community-based approach for providing health care services. Using the potential of primary health care established in local and national levels can be highly recommended to improve women's capacities and participation on strengthening community-based emergency management. Women can be educated and trained to perform disaster risk reduction measures and teach their families, neighbours and community members. Iranian women have proved their strong intentions to play their roles in planning, organising and conducting community-based disaster risk reduction projects and interventions.

Sweden

Erna Danielsson, Professor in Sociology, Risk and Crisis Research Centre, Mid Sweden University

Kerstin Eriksson, PhD, RISE Research Institutes of Sweden, affiliated Assistant professor at Risk and Crisis Research Centre, Mid Sweden University

(Personal Communication, 30 April 2024)

Established definitions of crisis management shape specific behaviours and habits associated with particular genders (Enarsson 2016), as evidenced in regulations and reports issued by authorities within the Swedish crisis management system (Kvarnlöf and Montelius 2020). This gender order influences crisis management practices, shaping patterns and norms within the field constrained by gender norms (Forsberg Kankkunen 2004). Our research in Sweden reveals that crises are framed to

2. World Economic Forum Global Gender Gap Report 2023, at www.weforum.org/publications/global-gender-gap-report-2023/.

focus on relevant actors, such as the COVID-19 pandemic, portraying women in elderly care and health care roles and men in higher managerial positions interpreting the crisis (Danielsson 2020; Danielsson et al. *2023). In wildfires, male firefighters are portrayed as heroes while women, often volunteers, are predominantly assigned caregiving roles (Danielsson and Eriksson 2022). In school fires, firefighters emerge as heroes, while women teachers are frequently perceived not as professional educators but as victims (Danielsson 2021). Similarly, in the military, barriers to achieving gender equality aren't just resistance; they also form a recurring pattern hindering normative changes (Linehagen 2022, 2023).*

Reshaping the gendered framework within the crisis management system requires attention to the structures outlined in governmental mandates, public inquiries, and regulations (Danielsson and Sjöstedt 2020; Kvarnlöf and Montelius 2020). Additionally, the media plays a crucial role in shaping narratives from crises, determining who receives a voice in crisis reporting and what is deemed essential to report (Öhman et al. *2016). If authorities and media continue to focus on the male norm in their writings and reporting of crises, achieving fair representation in emergency management will remain challenging for women.*

Australia

Imagine a gender equality policy for the emergency management sector matched with an action plan and accountability for its implementation with consequences for lack of progress.

In Australia, we have to imagine it, because so little has been achieved over the past 15 years to change the low rates of women in frontline or leadership roles in emergency management. Take for example, the proportion of career firefighters who are women in Fire Rescue Victoria. It stands at approximately 4%. In 2016, the then Department of Environment, Land, Water and Planning commissioned research to increase rates of female inclusion (DELWP 2016). The rate was then 4% (p.12). This is not the result of women preferring not to be firefighters. Women are actively excluded from this role, as evidenced in the research, and by one report or inquiry after another in Australia.

Gender is relevant both to women within emergency services organisations (career and volunteer) as well as to women in communities affected by disasters. In 2015, with input from approximately 500 emergency management practitioners, the then GAD Pod led the development of National Gender and Emergency Management (GEM) Guidelines. The guidelines stated:

Gender issues are known to compound the damaging effects of disaster on survivors. Increasing understanding of the relationship between gender and disaster will improve the health and wellbeing of (all) affected by disaster across Australia.

A recent addition to the GEM Guidelines addresses evacuation and relief centres and notes:

Existing guidelines on evacuation planning in Australia reflect the emergency management sector's broader lack of attention to gender. There is often resistance to requests for inclusion or consideration of safety needs (that go beyond) the imminent threat of disaster. However, it is possible to do both – well before any disaster – by planning ahead and educating staff and volunteers. Given the complex experience of safety in public spaces for women and people of diverse gender and sexual identities and the prevalence of gender-based violence and harassment, evacuation centres must be safe for those sheltering. Lives are endangered if community members choose to take their chances to escape fires, floods or cyclone rather than go into an evacuation centre where they feel unsafe.

The National GEM Guidelines are identified in the *National Midterm Review of the Sendai Framework for Disaster Risk Reduction 2015-2060 Report* (Commonwealth of Australia 2022). Australia's commitment to the gender pillar of the Sendai Framework is important. It sets a standard that means we must prove actions are underway to progress gender equality in the emergency management sphere. As in all social change work, actions must be 'top-down' and 'bottom up'. Achieving such a central goal as gender equality for both inside and outside emergency services organisations will take concerted effort in the face of resistance. Nevertheless, it is urgent, fundamental and inevitable.

Summary

We learn from the endeavours of other counties and our international colleagues. Table 1 provides a summary of needs, actions, outcomes and what it will take to progress gender equality in emergency services and planning.

Conclusion

Equal inclusion of women and non-binary people in emergency management results in increased capacity and greater safety and resilience. To achieve this, culture has to change and it has to change fast – because equal representation matters.

Table 1: Needs, actions, outcomes and what it will take to progress gender equality in emergency services and planning.

Country	We need:	We need to:	We will get:	It will take:
United States of America	More women leaders in emergency management and research.	Offer women social support and equal pay.	Better functioning teams; Role models for young women.	Focus, leadership, commitment to change.
United Kingdom	A critical mass of women in emergency management and leadership; understanding of how to serve diverse communities.	See the whole person in context when emergency management serves the community. Counter dominant masculine cultures in emergency management.	An emergency management system that anticipates and responds to diverse social groups; a better experience for people in a stressful situation.	Education, preparation, engagement with diverse people.
Canada	A SGBA+ (sex/gender-based analysis+) and a gender transformative approach (responding to emergencies while improving gender equity).	Use sex/gender-disaggregated data; Know how sex and gender factors are increasing vulnerability, for example women in domestic violence situations.	Better health for all, a resilient emergency management system.	Training of responders, education behind planning and policy development.
Iran	More emergency management participation by women to strengthen community-based emergency management.	Use existing networks, such as the primary health care network, to improve women's capacity to undertake disaster risk reduction work in their communities.	A flow-on benefit as women share their new disaster risk reduction knowledge with families, neighbours and community members.	Attention to the gender gap, local and national commitment, women's strong intentions.
Sweden	Fair representation for women in emergency management and media portrayal.	Reshape the gendered framework in emergency management, visible in government mandates, public inquiries and regulations. Shift the focus from the 'male norm' in emergency management and reporting.	A fair emergency management field, no longer constrained by the (old) gender order. More accurate portrayal of women and men in emergency management.	Accurate reporting by media, government and the emergency management sector; vigilance to identify and remove 'patterns' hindering gender equality.
Australia	Equal participation of women in emergency management; gender equality inside emergency services organisations and in emergency management services to the community.	Embed the GEM Guidelines into every disaster and emergency management organisation.	Increased capacity of the emergency management sector, improved health and wellbeing of all involved in emergency management and all affected by disasters.	Urgent, concerted action in the face of resistance.

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About the author

Dr Debra Parkinson is a researcher and the Executive Director of Gender and Disaster Australia. She is a strong advocate in the field of gender and disaster and has made significant contributions to policy and public perception of increased violence against women in disasters and issues related to gender and emergency management.

Avoiding institutional discrimination

Professor David King

Centre for Disaster Studies
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Disasters force people out of secure spaces and social relationships into public places such as refuges and evacuation centres where privacy is reduced. People who identify as members of minority groups in society, such as LGBTQ people, rely on privacy for security. Thus, their vulnerability as members of a community minority is increased during disaster and recovery and may be exacerbated by overt prejudice and discrimination.

In recent years, disaster risk reduction has shifted from an emphasis on vulnerability in the face of disaster to international policies of building resilience. Vulnerability is predicated on inequalities between people, households, groups and communities. Resilience targets the strengths and capacities of people and communities. Resilience is positive in contrast to the negative constructs of vulnerability and is useful to prepare people and communities for potential high-risk hazards. However, vulnerability assessment identifies diversity in society, albeit through a lens of constraints to solutions (e.g. demographics, socio-economic status, cultural, ethnic and gendered minorities) as well as physical proximity to a hazard. The positivity of building resilience identifies strengths and capacities in society, but it has a tendency to homogenise characteristics of resilience to the community level, thereby flattening and hiding diversity. LGBTQ people are largely ignored as a minority with specific needs. During response and recovery, diversity is subjugated to the immediacy of the event. Specific response and recovery processes and actors may exacerbate the vulnerability of the LGBTQ minority, especially during evacuation, support, counselling and rehousing. Faith-based organisations have traditionally provided support and care for people in need. This care provision is formalised when religious buildings and faith-based personnel are selected to provide evacuation centres and arrangements for the management and care of displaced people. An extensive literature review by King (2022)[1] identified a trend among some faith-based organisations and their adherents towards rejection or condemnation of LGBTQ people. There is a danger that these organisations may discriminate against the LGBTQ people.

A UK Government-funded network of researchers, CASCADE-NET, focused on society's capacity to deal with changing extreme weather risk. A special issue of the *Journal of Extreme Events*[2] examined the diversity of participants in disaster. King's (2022) paper reviewed the literature of experiences of LGBTQ people in disaster with implications for emergency management and policy and the roles and shortcomings of faith-based organisations in service provision. This places LGBTQ people, as both vulnerable and resilient, into a framework for emerging research on informal response to emergencies and disaster.

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NZDF uniformed women's performance, health and wellbeing: developing a research agenda

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The principal role of the New Zealand Defence Force (NZDF) is to protect the sovereign territory of New Zealand and the neighbouring Pacific Region and Southern Ocean. The NZDF supports security, resilience and wellbeing across a broad range of activities including peace and security, people and communities, humanitarian assistance and disaster relief.

To deliver this, NZDF must be diverse and have a workforce that is skilled, sustainable and affordable.[1] Gender diversity is a key focus and the NZDF is committed to attracting, developing, supporting and retaining more women.

Women were first accepted into the regular forces alongside men in 1977 when the NZDF became an integrated force. However, some restrictions remained in place until 2007 that effectively kept women from certain trades (especially combat-related) and training opportunities. In 2024, women represent just over 20% of the NZDF Regular Force, with representation varying across services (Royal New Zealand Navy - 27.5%, New Zealand Army - 15% and Royal New Zealand Air Force - 23.8%). Previous research has shown that the NZDF has a higher proportion of women in the Regular Force than other military Five Eyes countries of Australia, United States, United Kingdom and Canada.[2] However, in the NZDF, the average length of service is consistently shorter for women compared to men for all 3 services.[3]

To enhance the participation of women, the NZDF Directorate of Diversity and Inclusion established the Wāhine Toa programme, which covers 4 areas of attraction, recruitment, retention and advancement to improve gender equality and equity within the NZDF. To supplement the Wāhine Toa programme, the NZDF Defence Science and Technology (DST) Human Sciences team established a dedicated research effort to support the performance, health and wellbeing of NZDF uniformed women.

Despite the increasing representation of women in the NZDF and militaries globally, a gender gap in health and performance research exists. Women are underrepresented and research data collected related to men is often generalised to women.[4] The foundational knowledge required to optimise military women's performance, health and wellbeing is inadequate and, as a result, there are currently few evidence-based guidelines. This results in disadvantages for women in the military. Other military Five Eyes countries are conducting research to fill knowledge gaps and inform practices and policies for military women[5], however, these findings and recommendations may not reflect the NZDF context. Hence, research focused on NZDF uniformed women is needed.

This article describes the NZDF Women's Performance, Health and Wellbeing Research Programme, specifically the approach that researchers took to identify research priorities.

Figure 1 shows the iterative, mixed methods and multi-phase approach used to provide breadth of representation and depth of

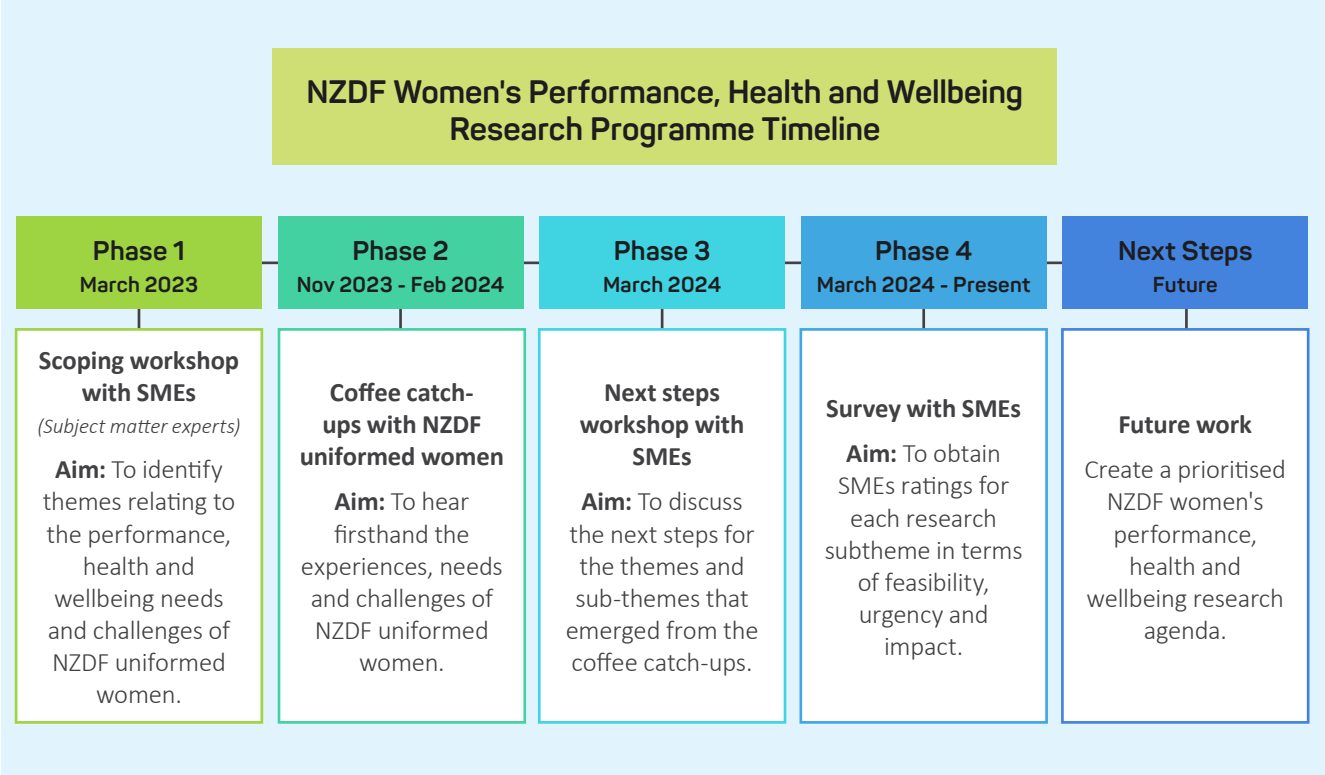

Figure 1: Timeline of the NZDF Women's Performance, Health and Wellbeing Research Programme.

understanding. The overall aim is to develop a research agenda that directs future research activities, education initiatives and policy development based on topics that are most pertinent to improving uniformed women's performance, health and wellbeing.[1]

Phase 1: Scoping workshop with subject matter experts

The first phase involved a workshop with 32 stakeholders and subject-matter experts from across the NZDF and external organisations (academia and industry). The aim was to capture the needs and challenges relating to the performance, health and wellbeing of uniformed women. Twenty-eight themes were identified. However, it was recognised that women in the NZDF are a diverse population and that representation from important demographic groups (e.g. junior ranks, Māori, Pasifika) was missing. Consequently, further scoping was required to ensure that captured themes accurately reflected the views of all NZDF uniformed women.

1. While the term 'women' is used throughout the programme, this work will be relevant to wider groups of people within the NZDF such as people with diverse gender identities, expressions, and sex characteristics. Although this research effort is centred around women, it will likely benefit other populations within the NZDF.

Phase 2: Informal coffee catch-ups with uniformed women

The second phase involved getting a wider intersectional perspective through a series of informal 'coffee catch-ups' with uniformed women to hear their experiences, needs and challenges. The following open-ended question was asked and discussed during each coffee catch-up: *'What has been your biggest health, performance, and wellbeing needs and challenges as uniformed women in the NZDF?'*.

Sessions lasted approximately one hour and notes were taken throughout to enable thematic analysis. In total, 167 uniformed women across 10 NZDF bases and camps participated in the coffee catch-ups.

Figure 2 shows the 23 main themes that were identified through thematic analysis. A further 80 corresponding subthemes were identified. Not all themes and subthemes indicated a need for research. Therefore, the 80 subthemes were separated and categorised as 'process/policy' (requires a review of the way we currently do things), 'education' (requires more education delivered to service members or the providers) and 'research' (requires research to answer the question and improve understanding/awareness of the need and challenge).

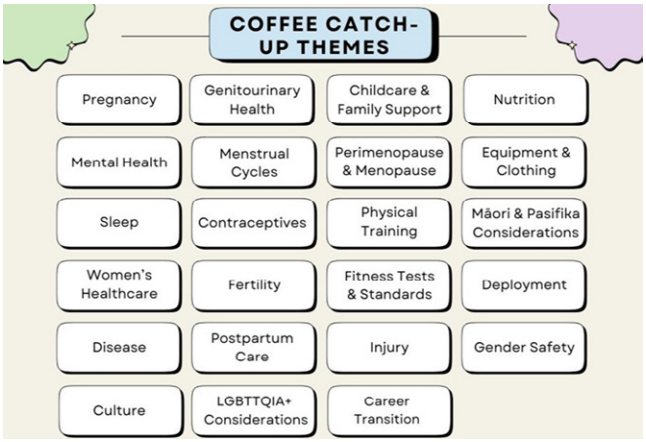

Figure 2: Themes identified from the coffee catch-up sessions.

Note: LGBTTQIA+ = Lesbian, Gay, Bisexual, Takatāpui, Transgender, Queer, Intersex, Asexual, the + represents other identities not captured.

Phase 3: Next steps workshop with subject matter experts

The third phase involved a workshop with 28 NZDF stakeholders and subject-matter experts to discuss the coffee catch-up findings and next steps. The first half of the workshop focused on subthemes that were categorised as process/policy and education. Workshop attendees were asked to confirm that classifications were correct and to identify members/units of NZDF who could be responsible for further work to address these issues and challenges. The second half of the workshop focused on the subthemes categorised as research, with attendees asked to identify research questions and discuss the impact, urgency and feasibility for each research subtheme.

Phase 4: Survey with subject matter experts

Following the workshop, a survey was sent out to 44 NZDF stakeholders and subject-matter experts. The survey focused on the 27 subthemes that were categorised as research and asked participants to provide a rating for each research subtheme on a scale of 1 (Not at all) to 6 (Extremely) for feasibility, urgency and impact as defined:[2]

- **Feasibility** - the likelihood that research on the topic will result in recommendations for education, process and policies that will improve the performance, health and wellbeing of uniformed women.
- **Urgency** - the immediacy of the need for research on a topic as it relates to the performance, health and wellbeing of uniformed women.
- **Impact** - the effect of a research topic in terms of population size and breadth as it relates to the performance, health and wellbeing of uniformed women.

The survey results will be used to prioritise research subthemes and create a research agenda.

2. Note that a topic ranked lower in terms of feasibility, urgency and impact does not necessarily mean that it is not important nor cannot, or should not, be addressed. The purpose of the survey is to help research prioritisation. It is recognised that the survey merely provides an indication of perceived topic importance for the 44 NZDF stakeholders and subject matter experts that were invited to participate in the survey, not NZDF women as a cohort.

Future

The prioritised research agenda will promote targeted and enduring efforts to enable the development of evidence-based practices and policies for NZDF uniformed women. Research efforts are critical to advance sex- and gender-specific solutions that enhance women's performance, health and wellbeing. Outcomes from this programme will support the recruitment and retention of NZDF uniformed women and will ultimately lead to greater diversity that can be harnessed for operational advantage.

Acknowledgements

The research team would like to thank the NZDF Performance, Health and Wellbeing Working Group for guiding this work. A special thanks to CDR Lynette Marchant and Helen Kilding for their leadership and ongoing support.

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Communities and agencies working together: the Multicultural Emergency Management Partnership

Thuch Ajak

MEMP Co-Chair (2021–2024) and Founder, African United Farm

Steve Cameron

MEMP Co-Chair (2021–2024)

Rita Seumanutafa-Palala

MEMP Co-Chair (2024 -) and Samoan and Pacific Islander community leader, advisor and advocate

Kate Steenvoorden

Co-CEO, Neighbourhood Collective Australia

The Multicultural Emergency Management Partnership model recognises that Aboriginal and Torres Strait Islander peoples in Australia and indigenous peoples around the world have always lived and coped with crises that we can learn from. In Australia, it is recognised that many emergency management and resilience approaches have not always best served the diversity of the cultures, languages and customs in our communities. As a result, communities can experience negative consequences.

It is well documented that multicultural communities remain disproportionately affected during emergencies and disasters. For example, in Australia during the COVID-19 pandemic, people born overseas were twice as likely to die from the disease. In addition, people born in non-English speaking countries had even higher death rates.[1]

Australian Bureau of Statistics data shows that 50% of people in Australia were born overseas or had a parent born overseas. Australian Bureau of Statistics data related to cultural diversity shows that more than 5.5 million people spoke a language other than English at home. Such diversity within the country calls for effective diversity and inclusive approaches.

Cooperation and trust between communities and emergency management authorities is essential before, during and after emergencies. However, it can be extremely difficult to build trust during an emergency event, especially for communities that have had negative experiences of authority, including people who experienced this in their countries of origin or for those who are not (yet) fluent in English. Strengthening connections and trust between communities and emergency services organisations is an ongoing process. This includes multicultural communities and the emergency management sector before, during and after emergencies to reduce the inequities faced by multicultural communities.[2]

The Victorian Multicultural Emergency Management Partnership (MEMP) is an award-winning initiative that bridges the gap between multicultural communities and the emergency management sector. MEMP was founded by the Victorian Council of Social Service (VCOSS) and the Ethnic Communities' Council of Victoria (ECCV) in 2020 to support communities during the pandemic. The MEMP brings together migrant and refugee community leaders with representatives of relevant emergency management organisations in Victoria.

Thuch Ajak, a South Sudanese community leader and MEMP Co-Chair said, 'What happens in emergencies is that multicultural communities look to their community leaders, religious ministers, or others who take responsibility in their communities.

'These are what we call "community connectors" and they are the first point of contact for the people belonging to the community.

'So having the community leaders at the table together with emergency services agencies makes it easier as they build the capacity of the community leaders to navigate the services.

'This is why the MEMP is unique, because it is driven by the community and it's the community that opens up and identifies where the gaps are', he said.

Better engagement between multicultural communities and the emergency management sector helps facilitate a greater understanding of each other's strengths, needs and priorities while also building relationships based on trust and respect.

As with all communities, people in multicultural communities have many skills and capacities that can be drawn on to better manage stressors and to cope with emergencies. The strengths of community members and leaders are often born of pre-arrival experiences of war and hardship and can include a capacity to cope under stress and adapt to change, strong leadership and community networks, the ability to mobilise their communities to take action, strong values around community responsibility and cross-cultural skills. However, a lack of awareness of local risks and hazards can be compounded by socio-economic disadvantage, language barriers, poor quality housing, pre-arrival experiences and cultural factors. These vulnerabilities are often magnified for people who arrived as refugees, those who are on temporary visas, people who are undocumented migrants or who arrived in the last 10 years.[3]

In many cases, community leaders and connectors are a key asset and driver of preparedness, response and recovery in migrant and refugee communities. Research by Wallace, Farmer and McCosker (2019)[4] shows that community connectors enable the flow of information, resources and relationships across cultural, social and organisational boundaries and the role of multicultural connectors in keeping communities safe was clearly demonstrated during the COVID-19 pandemic.

Rita Seumanutafa-Palala, MEMP Co-Chair said, 'There are so many insights and community-specific experiences that community leaders bring to MEMP.

'When these experiences are shared and reciprocated with the emergency management sector, the result is an improved and nuanced way of working together; for and with multicultural communities.

'I learnt so much about emergency management and preparedness through my COVID-19 response work.

'Developing and implementing culturally appropriate community initiatives in order to help my Pacific Island communities get through the pandemic really opened my eyes to the sheer hopelessness and vulnerabilities that my communities face during a crisis.

'My hope is that my community is given a chance to be prepared and better aware of why emergency preparedness is key to getting through a crisis as safely as possible.

'My involvement in the MEMP is my opportunity to advocate for this', she said.

The MEMP is an independent entity made up of members (see Table 1) that fosters sustainable and collaborative relationships between multicultural communities and the emergency management sector. It embraces diversity, builds inclusion in emergency management and supports better and equitable emergency management outcomes for multicultural communities. The MEMP's partnership model provides a framework for collaboration between the emergency management sector and multicultural leaders and connectors. With a vision for 'safer, connected and resilient communities', the model's objectives are to:

- provide greater cultural safety and cultural responsiveness for all who participate in and with emergency management organisations increase mutual understanding and trust between multicultural communities and emergency management organisations
- strengthen community resilience by enabling communities to prepare for, cope with and recover from the impacts of emergencies.

Many aspects of the MEMP have been designed to have community, not organisations, at the centre. Monthly online gatherings are run as open discussions rather than meetings.

The MEMP has strong support and interaction with multicultural communities and the emergency management sector across Victoria. Former Victorian Emergency Management Commissioner, Andrew Crisp AM APM, has supported the MEMP since its establishment and said, 'The MEMP has facilitated 2-way knowledge sharing to increase the sector's capability and capacity to effectively engage with the diverse communities in Victoria and to improve outcomes from emergencies.

'It is assisting the emergency management sector to better understand the strengths of community networks that can be drawn on and to improve community understanding of how to better prepare for, respond to and recover from emergencies.

'To put it simply, it's about emergency services and our communities genuinely listening and learning together about how to keep us safe', he said.

Working together as peers, MEMP members focus on:

- building relationships and multiple channels of communication
- strengthening and equipping community leaders with knowledge about local emergency management processes and tools

Table 1: MEMP membership 2024.

Leaders and connectors representing multicultural communities and organisations	Representatives from emergency management organisations
Al-Emaan Muslim Women's Group	Ambulance Victoria
Chinese Community Council of Australia (Vic)	Australian Red Cross
Ethic Communities Council of Albury/Wodonga	Country Fire Authority
Ethnic Council of Shepparton	Emergency Management Victoria
Hazara Community of Bendigo Association	Emergency Recovery Victoria
Kenyan community leader	Ethnic Communities Council of Victoria
Malayalee community leader	Fire Rescue Victoria
Multicultural community leader Geelong region	Life Saving Victoria
Pasefika community leader	Municipal Association of Victoria
Regional Victorians of Colour	Victoria Department of Health
Spectrum Multicultural Resource Centre	Victoria Police
United African Farm	Victorian Council of Churches Emergency Ministry
92 graduates of emergency management masterclasses	Victorian State Emergency Service

- engaging community leaders in local emergency management planning for relevant and tailored local approaches to emergencies
- developing simple, accurate and relevant information to disseminate in culturally safe and community-specific ways
- seeking opportunities and developing strategic alliances that build cultural safety and inclusion in emergency management organisations.

In early 2024, MEMP members gathered for a workshop and dinner to plan for the coming year. Priorities included:

- building stronger connections, relationships and trust at all levels
- building capacity for community leaders
- cultural safety/cultural education
- sharing community stories and experiences
- 'invisible' communities and emergency communications
- connecting with similar partnerships across Australia.

Ruth Harley, MEMP Co-Chair, said, 'The MEMP underscores a statewide commitment to understanding and addressing the diverse needs of multicultural communities during emergencies.

'Through a co-design approach, where the community and emergency management sector collaborate to deliver safety messages, we aim to develop accessible and culturally responsive resources and approaches.

'This will increase mutual understanding and will also build trust between communities and the emergency management sector, reinforcing our shared responsibility to prepare for, cope with and recover from emergencies', she said.

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The Australasian Women in Emergencies Network: a catalyst for gender equity and resilience

Bridget Tehan

President AWE and Convenor Australian Red Cross

Amanda Lamont

Vice-President AWE and Founder Nature Based Resilience

The establishment and growth of the Australasian Women in Emergencies Network (AWE) marks a significant step towards diversity, equity and resilience across the emergency management and disaster resilience sector.

In 2018, the AWE was established to provide a platform for women to connect in recognition of greater inclusion of women in the male-dominated emergency management and disaster resilience sector. The network has since expanded its reach to include New Zealand and, recently, the Pacific Region.

AWE's overarching goals are to promote, support and recognise the contributions of women to emergency management and disaster resilience. By providing a platform to network, promote, share information and collaborate, AWE contributes to the sector's overall growth and effectiveness.

Women bring unique skills and strengths to all areas of disaster resilience and emergency management and their insights and expertise help build resilience across Australasia. AWE has almost 2,000 members from a broad range of emergency services organisations,

AWE founders Katherine Cooney, Bridget Tehan and Amanda Lamont want to recognise the contribution of women in the emergency management sector.

Image: AWE

Almost 60 AWE members met over breakfast at the 2023 Australian Disaster Resilience Conference.

Image: AWE

community and non-for-profit organisations, all levels of government, education institutions, private businesses, volunteers and community members who play a wide range of roles in emergencies and disasters.

AWE's strength lies in the breadth of its membership as well as its networking, collaboration and knowledge sharing that creates a unique community across Australia, New Zealand and the Pacific Region.

The network's commitment to recognise, promote and support women in the sector is evident in its initiatives including members' local chapters, newsletters, networking events, site tours, speaker events, a mentoring program, scholarships, special-interest groups (e.g. the Women in Emergencies for Climate Action group) and the AWE Excellence Awards. Members also have access to relevant news, job opportunities and sector resources and updates that can enhance their professional development.

AWE established Australasian Women in Emergencies Day to recognise and celebrate women working in emergencies and disaster resilience. It raises the profile of women in the sector and provides a way for organisations to acknowledge the achievements of the women in their organisations and demonstrate their commitment to gender equity.

AWE's values are rooted in diversity, trust, relationships, adaptability and accountability. These values guide its activities and there is a strong emphasis on diversity and inclusion, welcoming women in all their intersectional identities and recognising and respecting individuals with diverse abilities, opinions, genders and ethnicities. AWE also welcomes allies of women and the promotion an environments where everyone, regardless of identity, can contribute to and benefit from its initiatives. The network recognises and acknowledges the ownership, connection and custodianship of all indigenous peoples to their lands.

AWE partners with a range of organisations within the emergency and disaster resilience sector as well as universities, industry organisations, peak bodies, networks, and other gender-focused organisations. This enables the network to leverage other knowledge, share information and collaborate extensively. AWE helps to reshape the landscape of emergency management and disaster resilience by fostering inclusivity, promoting gender equity and recognising the multi-faceted identities of people in the sector. AWE builds resilience across Australia, New Zealand and the Pacific and contributes to an equitable and diverse global emergency management community.

Through its initiatives, AWE advances gender equity and resilience and, to measure this, is embarking on an evaluation of its first 5 years to understand its broad contribution. As the network grows, it will be as a testament to the benefits of collaboration and shared knowledge to create safer futures. Looking forward, AWE aims to expand its influence, to drive positive change and to foster cultures of inclusivity and collaboration.

Gender equity in fire and emergency services is a global goal

Erin Liston-Abel

AFAC

In March 2024, an Australasian contingent of AFAC member representatives attended the United Nations 68th Session of the Commission on the Status of Women in New York. The group shared insights and formed new partnerships to accelerate women's recognition and representation in the fire and emergency services sector.

Attendance was facilitated by the Champions of Change Coalition, which has a globally recognised, innovative strategy to achieve gender equality, encourage more women and more women from diverse backgrounds into leadership positions and build respectful and inclusive workplaces. Through the strategy, leaders form a high-profile coalition to drive and be accountable for change on gender equality issues in their organisations and communities.

AFAC's partnership with the Champions of Change Coalition commenced in 2017, establishing the Champions of Change Fire and Emergency Group. The group is convened by Kristen Hilton who was a former Victorian Equal Opportunity and Human Rights Commissioner. The group includes chief executives, commissioners and chief fire officers from fire agencies as well as emergency and land management services across Australia and New Zealand. Involvement in the Champions of Change strategy supports and strengthens AFAC's wider focus on diversity and inclusion.

The group has shown sustained progress in women's representation over the past 5 years. Through individual and collective actions, AFAC member organisations have grown the talent pool of people for leadership and fostered safe and inclusive workplaces. A priority for the group has been building the representation of women in frontline service-delivery positions that serves as a critical pathway to leadership positions in the sector.

United Nations 68th Session of the Commission on the Status of Women (CSW)

The CSW was held from 11–22 March 2024 and was attended by an Australasian delegation comprising AFAC Deputy CEO, Erin Liston-Abel, New South Wales SES Commissioner, Carlene York, Fire Rescue Victoria Deputy Commissioner, Michael Morgan, Country Fire Authority CEO, Natalie MacDonald and Convenor, Kristen Hilton.

The CSW is the largest annual gathering dedicated to gender equality and women's empowerment. This year's theme was, 'Accelerating the achievement of gender equality and the empowerment of all women and girls by addressing poverty and strengthening institutions and financing with a gender perspective'.

Throughout the week, meetings involved sharing insights, strategies and commitments focused on accelerating gender parity in leadership and addressing the persistent gender pay gap. Several outcomes involved outlining pragmatic approaches and setting ambitious targets with clear, actionable steps to realise gender equality by 2030.

AFAC and Champions of Change representatives at the US Federal Emergency Management Agency. (L-R) Annika Freyer, Carlene York, Natalie McDonald, Elizabeth Broderick, Michael Morgan, Kristen Hilton, Erin Liston-Abel.

Image: AFAC

Experiences and ideas were exchanged at a roundtable on Progressing Gender Equality in the Fire and Emergency Sector. Delegates were joined by the US Fire Administrator and representatives from the US Federal Emergency Management Agency to discuss the barriers to increasing women in frontline roles and their inclusion in the workplace. The commonalities in experiences across different geographies reinforced the incredible opportunity to learn from one another and progress change together.

Several outcomes resulted from the meeting include:

- sharing insights from recruitment drives, including what works and what doesn't to attract and recruit women to frontline roles
- sharing research demonstrating linkages between diverse teams and improvements to health and psychological safety outcomes
- committing to deliver an international roundtable with industry leaders and fire and emergency services practitioners to discuss gender-inclusive personal protective equipment and clothing
- collating current gender-inclusive personal protective equipment research to identify gaps
- convening an annual roundtable to report on actions and identify opportunities to collaborate.

Common challenges and opportunities were discussed and new partnerships were formed on the importance of creating safe spaces. The Australian delegation advocated for uniforms that are fit-for-purpose and are designed for women as well as ways to ensure that fire and emergency services organisations genuinely support the work of women and men equally. The discussions highlighted the need for global collaboration, promising practices and transferable benefits such as how greater psychological safety equals greater physical safety that was shared by New York Fire Commissioner, Laura Kavanagh.

The delegation also attended the United Nations Global Compact CEO roundtable that considered the importance of gender equality in the workplace as well as promising practices to achieve equal representation in the workplace. All businesses stand to benefit from greater equality for women. The UN's Global Compact Women's Empowerment Principles can be adopted by businesses to evolve their value system and a establish principles-based approach to empower women in the workplace and community. The 7 principles:

1. Establish high-level corporate leadership for gender equality.
2. Treat all women and men fairly at work; respect and support human rights and non-discrimination.
3. Ensure the health, safety and wellbeing of all workers.
4. Promote education, training and professional development for women.
5. Implement enterprise development, supply chain and marketing practices that empower women.
6. Promote equality through community initiatives and advocacy.
7. Measure and publicly report on progress to achieve gender equality.

Governments, business leaders and organisations around the world have focused on the 'future of work'. Contemporary changes are influencing the work environment including technological advances, social and demographic shifts, new patterns of globalisation, post-pandemic recovery and climate change. These trends are disrupting traditional models of work and learning as well as the nature of jobs and the composition of workforces.

The Champions of Change Coalition resource, 7 Switches: A Guide for Inclusive Gender Equality by Design[1], helps to embed inclusive gender equality in all decision-making and design processes across everything we do and creates a future where inclusive gender equality is a fundamental principle, rather than an afterthought.

The AFAC delegation listened and learnt from other attendees about global challenges and advances in women's rights. These stories served as a reminder of the indispensable role women's rights groups and activists play in influencing legal and policy reform to tackle gender inequality.

The CSW reinforced AFAC's commitment to progress equality for women through transparency, leadership and decisive action. It was a privilege for AFAC to be invited by the Champions of Change Coalition to be part of a community committed to making a difference and to see firsthand the potential we have to drive change together.

1. 7 Switches: A Guide for Inclusive Gender Equality by Design, at https://championsofchangecoalition.org/resource/7-switches-a-guide-for-inclusive-gender-equality-by-design/.

The Australasian delegation participated in the United Nations Global Compact CEO roundtable as part of the United Nations 68th Session of the Commission on the Status of Women.

Image: AFAC

Moving towards gender equality

The Champions of Change Fire and Emergency Group has focused on growing the talent pool with 96% of AFAC member organisations having systems and structures in place to address bias and ensure equality in their recruitment and promotion processes. Overall, women's representation increased between 2018 and 2022 (latest figures):

- 27% women's representation achieved across the group, up from 23% in 2018
- 33% women's representation achieved in key management personnel (CEO-1) roles across the group, up from 27% in 2018
- 38% women's representation achieved in general manager roles, up from 26% in 2018
- 35% women's representation achieved in senior manager roles, up from 22% in 2018

In 2023, 87% of organisations had a leadership commitment to gender equality through a specific strategy action plan, up from 74% in 2022. Likewise, 70% of organisations had undertaken specific actions to enable flexible work for frontline workers, up from 52% in 2022.

The group will be working to ensure everyone in the fire and emergency sector has access to appropriate, fit-for-purpose equipment and clothing that is gender inclusive and meets diverse physiology and cultural requirements. The group is working to lift the number of women attracted to and recruited into the sector, including frontline roles. The group is also addressing the culture across the sector to make it an equal and inclusive environment where people can thrive and progress their careers equally.

The Champions of Change Fire and Emergency Group: https://championsofchangecoalition.org/groups/champions-of-change-fire-and-emergency/

The United Nations 68th Session of the Commission on the Status of Women: www.unwomen.org/en/how-we-work/commission-on-the-status-of-women

Empowering first responders: the importance of training

Mary Barry

Accredited Trainer
Gender and Disaster Australia

Emergency services workers are the backbone of emergency response efforts. But are they adequately prepared to navigate the complexities of gender dynamics during disasters?

As an accredited trainer with Gender and Disaster Australia (GADAUS), I've observed a concerning trend; the underutilisation of lessons in disaster training by first responders, in particular male first responders. It's time to confront this and understand why this training is essential for all emergency workers including first responders.

GADAus offers a Lessons in Disaster training package that delves deep into the profound effects of gendered expectations before, during and after disasters. Have you considered or thought about what is expected of you as a male first responder? Are you comfortable with these expectations and can you consistently meet them? The evidence suggests that rigid notions of masculinity can significantly influence the behaviour of male first responders, often to the detriment of individuals, families and communities. These behaviours include:

- emotional stoicism - suppressing emotions and appearing stoic in the face of adversity
- aggression and dominance - men should be aggressive and dominant
- avoidance of help-seeking behaviour - being discouraged from seeking help or showing vulnerability, not accessing medical or mental health services
- homophobia and transphobia - adhering to rigid masculine stereotypes that can lead to discrimination against individuals who are not perceived to fit within narrow confines, including gay and transgender men
- limited roles in parenting and caregiving - limiting men's involvement in caregiving and parenting roles.

The training unpacks how increasing gender-inequality during and after disaster effects women, men, LGBTIQA+ people and other minority groups including increased violence against women reduced mental health for men and women and reduced service access for LGBTIQA+ people. The training aims to:

- increase understanding of how gender expectations affect all aspects of disaster preparation, response and recovery
- strengthen the capacity of the emergency management sector to recognise and challenge damaging gender stereotypes
- increase awareness of the value of building a gender-responsive and disaster-aware organisation
- ensure the safety needs of women, men, LGBTIQA+ people and other minorities are met in disaster planning, response and recovery
- assist participants develop individual and organisational strategies aimed at:
    - raising awareness of gender and gender violence in emergency management
    - including family and domestic violence in emergency planning, response, and recovery

Access the GADAUS training at https://genderanddisaster.com.au/training

Breaking the silence on women's safety in disaster

Loriana Bethune

Gender and Disaster Australia

Women should expect safety in an emergency relief centre. Yet, the opposite can be true, and the fact that women may be unable to find safety underscores the urgent need to reconsider how we think about women's safety during disasters.

Media exposure in *The Guardian*[1] and ABC Online News[2] reported on the vulnerability of women to violence and sexual assault in evacuation centres in the aftermath of the floods in New South Wales Northern Rivers in 2022. This has rightfully elicited shock and condemnation from within the emergency management sector.

But should these revelations come as a surprise? The reality is that despite years of women being at-risk during disasters, it is only now (2024) that this issue has gained sustained and significant national attention in Australia. There has been only isolated media coverage and scant research, discussion or acknowledgment of this pervasive issue prior to recent reports.

Research conducted by the University of Newcastle[3], revealed instances of violence and sexual assault that resulted in pregnancies in the aftermath of the Northern Rivers floods. This was attributed to inadequate triaging and separation of people at evacuation centres and demands serious reflection and action.

The issue seems to be an uncomfortable truth, yet, it is unequivocally unacceptable that women should continue to face such dangers. The question arises: why has there been a lack of meaningful action to address this glaring problem?

A Gender and Disaster Australia (GADAus) literature review collection (see page 73) sheds light on the emergency management sector's reluctance to confront this issue. In particular, 2 reviews relate to traditional women's health issues: 'Sexual violence and disasters' and 'Sexual reproductive health and disasters'. These reviews detail how the subject remains unexplored and unsupported in Australia, the United Kingdom and the United States. While there is some literature on these topics in the context of the developing world, the applicability to developed nations like Australia is limited.

Existing literature suggests that disasters disproportionately affect women, with emerging evidence indicating a rise in sexual violence in disaster settings due to heightened stressors.[4] Women also face other issues such as access to contraception, breastfeeding facilities and reproductive health support for women in evacuation relief centres alongside persistent challenges to address workplace cultures and health concerns.[5]

Despite acknowledging the disparities in sexual reproductive health access, policies like *National Women's Health Strategy*[6] have failed to adequately deliver service continuity during disasters. What can be concluded from this is that life-changing issues faced by women are not prioritised in disasters beyond the perfunctory[7], despite severe consequences for women and it is time they were addressed.

Some academic groups are starting to make their mark. Efforts led by researchers at West Sydney University and the University of Newcastle are shedding light on women's issues during disasters. This research is readily available, but a gap persists where the emergency management sector does not hear it unless it is attached to a newsworthy item, such as women's safety in evacuation centres.

The sector is constantly shifting and adapting to the increasing frequency and intensity of disaster events. This leaves little room for endeavours that are not perceived as immediate priorities.[6] Historically, the sector has been dominated by a monocultural structure, predominantly comprising men within a culture of masculinity.[8] As a result the sector has a narrow focus on issues that this masculine culture finds important.[9] For now, we must acknowledge this and do better by supporting and funding research linked to recommendations and actions and raise issues related to women, LGBTIQA+ people and other non-binary people.

In practice, incorporating women's sexual reproductive health considerations into emergency response planning and recovery efforts is essential, as is women's safety in disasters. The *National Gender and Emergency Management Guidelines*[10] can help. The guidelines are a practical checklist that any organisation involved in emergency management can adopt to understand how to appropriately support women, LGBTIQA+ people and other non-binary people during a disaster, including safety from sexual violence and sexual reproductive health care.

Acknowledgment

We gratefully acknowledge researcher Helen Hickson for her invaluable contributions to this article.

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Shifting language in emergency management: from 'vulnerability' to 'authenticity'

Sharon Bourke

Gender and Disaster Australia

In the high-stress, high-stakes world of emergency management, where decisions can mean the difference between life and death, there exists a silent yet significant barrier to help-seeking of first responders: the perception of vulnerability.

Historically, the culture within many emergency services organisations has been one of stoicism and resilience, where admitting any form of weakness is often seen as incompatible with the sector's rugged ethos. This perception has created an environment where individuals, particularly men, may feel discouraged from seeking support due to the fear of being perceived as vulnerable. However, a shift to embrace the concept of 'authenticity' rather than 'vulnerability' could foster a supportive, effective and resilient workforce.

The stigma of vulnerability

The word 'vulnerability' often carries a negative connotation. It suggests weakness, an inability to cope and a departure from the ideal of the unflappable hero who can handle any crisis. This perception is particularly pronounced among men in these roles who are often socialised to equate emotional openness with a lack of masculinity. As a result, many may choose to suffer in silence rather than to seek help, fearing that admitting vulnerability could jeopardise their career, reputation or self-image. This stigma affects wellbeing and can have implications for team dynamics and overall effectiveness in crisis situations. Furthermore, first responders may experience difficulties at home, as expectations and stressors of the workplace are often incompatible within a family dynamic. Partners of first responders often recognise distress in their loved ones but meet resistance or relegation if they suggest seeking help, which can contribute to stress in the home environment.

The power of authenticity

The concept of 'authenticity' carries a positive and empowering connotation. Being authentic means acknowledging one's true feelings, strengths and limitations without fear of judgment. It is about being honest with oneself and others and it allows for a genuine connection with colleagues, fostering a team environment based on trust and mutual respect. Authenticity can also allow for frank self-evaluation, nurturing individual growth and furthering an individual's experience of competency. In the context of emergency management, authenticity can lead to effective communication, better decision-making and a stronger and cohesive team.

Benefits of embracing authenticity:

- Improved mental health and wellbeing: By encouraging authenticity, emergency management organisations can create a culture where seeking help is seen as a sign of self-awareness and a desire for personal growth, rather than a weakness. This can significantly improve the mental health and wellbeing of personnel.
- Enhanced team dynamics: Authentic interactions build trust and understanding within teams. In high-pressure situations,

this can translate to improved communication, better collaboration and a stronger sense of camaraderie.

- Increased resilience: Authenticity allows individuals to acknowledge and address their limitations and stressors that assist coping strategies and increase resilience, both individually and collectively.
- Better decision-making: When team members feel comfortable being authentic, they are likely to share their true thoughts and concerns, leading to improved risk assessments and well-rounded decision-making.
- Reduced burnout and turnover: A culture of authenticity can help mitigate burnout and turnover by creating a supportive and sustainable working environment.

Challenges and consideration

While the shift from 'vulnerability' to 'authenticity' offers many benefits, it is not without challenges. Changing entrenched cultural norms and perceptions, especially in the emergency management sector, requires a concerted effort at all levels of the organisation. Leadership plays a crucial role in modelling authentic behaviour and creating a safe space for others to do the same. Training and education can also play a part, helping to reframe the concept of vulnerability and emphasising the value of authenticity.

Conclusion

The words we use to frame the concept of seeking help in high-pressure careers like emergency management matters. By shifting the focus from 'vulnerability' to 'authenticity', we can break down barriers, encourage supportive and resilient workforces and enhance the effectiveness of emergency response teams. It is about making cultures that value the strength in honesty, the courage in admitting limitations and the power of genuine human connections.

The power of words: why 'vulnerability' should not be applied to First Nations peoples

Ammie Howell

Gender and Disaster Australia

Language and its context are a powerful tool. Language holds persuasion, has lasting effects and has the ability to assert power as well as influence social realities.

Applying wording with negative connotations to describe a nation of people is an exertion of power. Describing First Nations peoples as 'vulnerable' is an example of a negative connotation that influences and holds power over strong, proud people. It influences the ongoing judgement that First Nations people in Australia have experienced since colonial settlement.

As an Arrernte woman, I don't see my people as 'vulnerable'. My people have survived genocide, assimilation, racism, inhumane treatment and discrimination. This is evidence of our strength, not our vulnerability.

Against measures of socio-economic status, the clear inequalities between Indigenous and non-Indigenous Australians show disproportionate rates of disadvantage, but this does not make us 'vulnerable'. So why not use the term 'disadvantaged' instead? Is it because the word disadvantaged identifies a problem within society, instead of the people being labelled? Shifting our language away from using disempowering terms such as 'vulnerable' and examining why some communities experience the effects of emergencies and disasters more acutely than others helps to reduce the power that is held over a nation of people. This can influence social attitudes to change the narrative of social realities.

How we use language will either build barriers or break barriers. How we communicate our experiences and issues can also be expressed through more than just words.

There is still widespread lack of cultural awareness of First Nations peoples and cultures and minimal understanding of culture and cultural obligations to Country. Likewise, there is minimal understanding of kinship structures and, sadly, minimal understanding and/or lack of empathy for trauma and generational trauma carried by most.

Interwoven concepts of connection

I created a 3-piece artwork within which are 2 half circles on the top and bottom and full circle in the centre. This represents the journey through the past, the present and into the future.

To understand the past, we must be solid in the present and the future. Disasters, of any kind, are hard-hitting for anyone who is affected by them. For First Nations peoples, the effects can be much more with cultural trauma included.

These 3 canvases represent 3 interwoven concepts that are linked within each other and to each other: the Human World, the Physical World and the Sacred World. The canvases connect through a flowing line. This is the connection and all 3 concepts are interlinked, connected through many elements of our culture.

Canvas 1 – Human World: This artwork depicts our links in community, in kinship groups, in ceremonies, in relationships, our family supports and our community supports. This is Connections.

Canvas 2 – Physical World: This artwork is the land, the country, the soil, ochre, grass, waterways, mountains, trees, animals, sky, bush medicines and bush foods.

Canvas 3 – Sacred World: This is our stories, our connection to our ancestors, our dreaming, our creation, our song lines. It's our healing, our caring for Country and our lore.

When disaster has affected our Country, our community and kinship links, then those links are broken. And when one link is broken in any of these 3 concepts, it intertwines and influences all other links to our identity and cultural responsibilities.

We have cultural obligations to Country, all aspects of Country. We are guided by our ancestors and the knowledge they have passed down through generations to maintain and care for Country. This is done through ceremony and teachings. Gendered roles within culture are widespread. We have men's business and we have women's business in all cultures across Australia. Men have cultural roles and women have cultural roles. These influence the ways that communities experience and recover from disasters.

When Country experiences disaster, we cannot commit to our cultural obligations to that Country. Therefore, it affects who we are as First Nations peoples. When we don't have access to Country, we feel it in our spiritual beings and our human world and the physical world is affected too.

Innovating for inclusion: Victoria Police Trans and Gender Diverse Employee Network

Jeremy Oliver

Eda Sofía Correa Bernini

Victoria Police

Victoria Police has a number of employee networks for employees to connect with one another around shared interests and identities. The Trans and Gender Diverse Employee Network (TAGDEN) is in its second year.

Employee networks provide many benefits to organisations including fostering and promoting inclusion, supporting organisational change, improving and increasing diversity, identifying and developing leaders, providing insight into employee experiences and connection as well as insight into diverse communities within the broader community.[1]

Networks can serve a variety of functions:

- Peer-to-peer support and professional development.
- A resource that can be tapped to better understand issues affecting identity groups within organisations or to get insight into how to interact with communities outside of the organisation.
- A space that will foster inclusion and lead to better outcomes for the wellbeing of employees.
- A safe space for employees to discuss, manage, action and advise on issues that are affecting members of their community and raise these issues with a united voice within the organisation.
- Educate members of the organisation through peer-to-peer training.
- A mechanism for employees to connect across silos with one another.

Network members volunteer their time because they are motivated to fill a visible, responsible function in support of people who share their affinity. They are not required to contribute their lived or professional expertise to organisational priorities. This said, well supported and sponsored employee networks with clear, well-articulated purpose are more likely to contribute to the development of organisational priorities and are more likely to be an asset when dealing with communities.[2]

Jeremy Oliver said, 'As the LGBTIQA+ Communities Portfolio Manager, and previously one of only 2 full-time LGBTIQA+ Liaison Officers at Victoria Police and a member of the Victoria Police Pride Council, I have been involved in LGBTIQA+ advocacy since I joined the force.

'When I was the LGBTIQA+ Liaison Officer, my role covered Victoria's Southern Metro Region, which afforded me the chance to meet a wide range of employees. During this time, I had the pleasure of meeting trans and gender diverse employees across Victoria, and quickly realised that these employees did not know one another. At the time, I was also exploring my own personal gender identity. I didn't feel entirely comfortable identifying as a 'man' but I didn't have the language or concept of gender diversity to fully explore what this meant to me.

1. Based on a 2023 discussion paper produced by Christine Mulholland from the Department of Justice and Community Services and provided to Victoria Police as a partner in the supporting research. 'Increasing the Sustainability of Employee Resource Groups' draws on survey responses from public sector employers, Diversity and Inclusion Community of Practice members and employee resource group members.
2. Victoria Police Workforce Diversity and Inclusion Framework 2023-2030: Action 4, Employee Networks Review. Research and consultation done by Peter Knight.

'Navigating this personal journey in a professional environment added a level of complexity. I was making enquiries into the supports available and processes that existed for trans and gender diverse employees, of which there was few at the time. The early processes that were in place were clunky and risked causing further harm to employees', said Jeremy.

Innovation is born out of necessity and this led to Victoria Police staff creating the Trans and Gender Diverse Employee Network (TAGDEN), which is supported by the Gender Equality and Inclusion Division and Victoria Police Pride Council. TAGDEN started in August 2022 as a small group for people who identified as transgender, gender diverse, non-binary and/or gender questioning/exploring employees, wherever they were on their gender identity journey.

TAGDEN offers a safe and inclusive space for trans and gender diverse employees to come together, share stories and experiences, seek peer support and feel part of a larger trans and gender diverse community. The focus is on community, connection, support, advocacy and awareness, amplifying voices and celebration. The network is private and confidential, which allows people to come to meetings and events as their authentic self, which includes using affirmed names, pronouns, and gender expression.

Since it began, TAGDEN has connected trans and gender diverse employees and communities by:

- developing strategic partnerships with internal and external stakeholders
- improving visibility through an intranet page and centralised email account
- hosting social events and online meetings
- providing crucial peer support to employees
- emerging as leaders in subject-matter expertise within the organisation
- influencing important organisational improvements such as the implementation of a gender affirmation planning document and advice regarding gender affirmation leave in the enterprise bargaining agreement.

In December 2023, TAGDEN was awarded Pride Initiative of the Year at the inaugural Victoria Police Pride Awards ceremony. This was an opportunity to recognise and celebrate TAGDEN and highlight how it has improved the wellbeing of LGBTIQA+ people and communities in the organisation and across Victoria. The award was sponsored by The Police Association Victoria, which has supported trans and gender diverse employees and improved workplace conditions and culture.

TAGDEN was recognised again in 2024 when it received a Highly Commended Certificate as part of the annual GLOBE Victoria Pride Awards. GLOBE Victoria is a registered

Wayne Gatt, Tyler McRae and Jeremy Oliver at the Australian LGBTQ+ Workplace Inclusion Awards.

Image: The Police Association Victoria

charity that connects LGBTIQA+ people professionally and socially while nurturing communities in Victoria.

TAGDEN has emerged as one of few trans and gender diverse employee networks across the Victorian Government. It continues to build and nurture strong relationships across the Victorian Public Service LGBTIQA+ Pride Network and GenSHED, as well as other Victoria Police employee networks.

In June 2024, Jeremy Oliver received the Euphoria Social's Courage Award in recognition of their efforts to promote LGBTIQA+ inclusion in Victoria Police. Victoria Police was recognised as a Silver Tier Employer at the 2024 Australian LGBTQ+ Workplace Inclusion Awards. The awards are based on results from the Australian Workplace Equality Index (AWEI) that is a benchmarking tool to assess workplaces on their LGBTQ+ inclusion initiatives. In this year's AWEI awards, Victoria Police was the highest Australian law enforcement agency to be recognised and the only Victorian Government agency to be awarded silver.

'I am incredibly proud of where Victoria Police is at and what work is being done for trans and gender diverse employee inclusion. I know there is still a long way ahead but the appetite for change is evident. I encourage people to understand that visibility, equal rights and allyship for trans and gender diverse people is incredibly important. It changes attitudes, opens people's minds, helps to destigmatise diverse gender identities and plays a crucial role in raising awareness to eliminate discrimination and other barriers to inclusion', said Jeremy.

Addressing gender inequity in firefighting: the role of Women and Firefighting Australasia

Melinda McDonald CF

Women and Firefighting Australasia

With the changing effects of high-risk hazards, technological advances and the shifting demographics of communities, the pursuit of equity, diversity and inclusion has never been more crucial for effective emergency management.

As communities become more diverse, resilience-building requires a shift from working for communities to working with them. This necessitates greater diversity in skills and capabilities among emergency management personnel to make diversity and inclusion both a moral and business imperative.[1]

Women play a pivotal role in emergency services organisations throughout Australasia, saving lives and safeguarding communities through their positions in frontline, administrative and technical-support roles at every level.[2] While initiatives such as the AFAC partnership with the Champions of Change Coalition have contributed to improvements in key areas for women in emergency management, particularly in agency support and policy change to address bias in systems and processes[3], significant underrepresentation of women persists. This is particularly so in frontline firefighting roles. Research continues to highlight the gendered nature of the fire services, reinforced by historical ties to militaristic structures, which perpetuate male dominance and cultural masculinisation.[4]

With this in mind, Women and Firefighting Australasia (WAFA) plays a critical role in heightening visibility of, and advancing opportunities for, women across the fire and emergency services sectors. WAFA's mission is rooted in collaboration with stakeholders across communities and emergency services organisations to cultivate confidence and support for women in their roles. The organisation's objectives are to raise awareness of women's contributions, facilitate discussions on challenges and opportunities, forge partnerships and foster personal and professional development opportunities.

WAFA advances the opportunities for women in the fire services to increase their personal and physical skills.

Image: WAFA

The biennial WAFA Conference offers a valuable forum for knowledge exchange and networking.

Image: WAFA

WAFA's partnerships with agencies such as AFAC and Wellbeing Australia, along with its thought-leadership and policy development contributions, foster awareness of the involvement and capabilities of women to bring change in the sector. The biannual WAFA conference, held in conjunction with AFAC conference, is a platform for knowledge exchange and networking. This advances the role of women as decision-makers and strategy-shapers.

To see sustainable change, diversity and inclusion must be treated as more than 'buzz words'. Diversity and inclusion must be recognised as fundamental principles that drive effective emergency management. WAFA will continue to promote equity and empower women as we work towards a more inclusive and resilient sector.

WAFA President Quinn Cramer opened the 2023 WAFA conference.

Image: WAFA

WAFA calls on emergency services organisations to set equally high standards. Through collaboration, awareness-building and action, we can pave the way for a future where all individuals have the opportunity to meaningfully contribute to inclusive, empathetic and community-centric organisations and communities.

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A flood of support: Rotary's nationwide campaign to combat domestic violence

David Harmon

District Commissioner, Rotary

In Ballina, a Rotary club is changing the community's understanding and response to domestic and family violence. The club organised a groundbreaking community walk in 2019 that attracted over 800 participants to raise awareness about such violence.

Leveraging our background in education and its crucial role to instigate long-term behavioural change, my wife, Robyn, and I initiated the Rotary club's support for the delivery of the Love Bites Respectful Relationships education program in local schools.

In 2022, the floods in the Northern Rivers region of New South Wales left thousands of people without homes. Financial and emotional stress were playing out negatively on relationships. It felt like boiling point across the community as people and families

The 'NO to Domestic and Family Violence and YES to Respectful Relationships' t-shirts were distributed through local Rotary clubs.

Image: Jodie Shelly

lived in their cars or in tents. There was a lot of pressure on families. Incidents of domestic and family violence emerged or escalated and the township of Ballina experienced a family violence death in January 2023. In response, the Rotary Club of Ballina-on-Richmond worked with its partner, Cherry Street Sports Group, to launch the Purple Friday campaign.

This initiative received funding to distribute purple shirts bearing the message 'NO to Domestic and Family Violence and YES to Respectful Relationships' to businesses, schools and community members. The campaign quickly gained momentum and over 90 businesses, schools and community groups in Ballina participated by wearing the shirts each Friday.

Spurred by this success, I proposed extending the campaign across Australia, New Zealand and to the Pacific Islands by reaching out 19 Rotary district governors across Rotary Zone 8. All 19 governors adopted the campaign, which was the first time in 40 years that Rotary in Zone 8 (covering 16 countries) adopted a common cause or project. This signifies how seriously Rotary views the devastating effects of domestic violence on communities.

Rotary clubs nationwide embraced the campaign and organised 110 activities dedicated to combating domestic and family violence. I forged partnerships with stakeholders including New South Wales Police and the National Association for the Prevention of Child Abuse and Neglect, which proved a great partnership to tackle this societal issue. I believe this is a whole-of-community problem that will take a whole-of-community approach to bring about positive change including shifting accountability for men's violence against women to men.

We must combine our efforts, resources and energy to address this scourge and, in doing so, create hope in the world. This campaign has great potential for the emergency services sector to join in to say 'no' to domestic violence, as emergency services personnel are often regarded as role models for young men and women. Imagine the influence they could have in our society by rejecting violence and supporting respectful relationships.

More information about the Love Bites Respectful Relationships project is available at https://rotaryclubofballinaonrichmond.org.au/rotary-zone-8.

Staff at Cherry St Sports Group wearing purple shirts for Purple Friday.

Image: Jodie Shelly

Disaster context sheets leverage data to enhance community engagement

Loriana Bethune

Gender and Disaster Australia

In a new initiative designed to improve gender responsiveness before, during and after disasters, Gender and Disaster Australia (GADAus) curated a series of disaster context sheets related to 20 locations across Australia.

The disaster context sheets provide relevant social and environmental insights into disaster-affected areas. The rapid assessments support trainers, recovery and response workers and others by providing gender-disaggregated data for a clearer understanding of the disaster context. The intention is to ensure that trainers going into communities to work with them are aware of recent disasters and the social and physical landscape of the region.

It is well understood in the emergency management sector that the briefing process is fundamental to a well-planned and coordinated response.[1] It provides the foundation for the strategy and tools used to achieve the best outcome for the response. A well-coordinated and knowledgeable workforce has the greatest chance of success at minimising the effects of the emergency on communities.

There are 20 disaster context sheets that cover different geographic areas, such as a regional town, a local government area, a capital city or a whole state. They are:

- Australian Capital Territory
- Alice Springs, Northern Territory
- Bundaberg, Queensland
- Darwin, Northern territory
- Eurobodalla, New South Wales
- Greater Brisbane, Queensland
- Greater Sydney, New South Wales
- Gympie, Queensland
- Ipswich, Queensland
- Lismore, New South Wales
- Mallacoota, Victoria
- Mid Murray, Victoria
- Mildura, Victoria
- Perth, Western Australia
- Snowy Valley, New South Wales
- Tasmania
- Towong, Victoria
- Wyndham-East Kimberley, Western Australia
- Yarra Ranges, Victoria
- Yorke Peninsula, South Australia.

Where a disaster context sheet is not available for a specific region, trainers and others can easily see the breadth of information they need to be aware of by referring to a sheet developed for a similar location. The briefing process could also extend beyond the response phase and be helpful in other phases such as preparedness and recovery.

The disaster sheets were developed iteratively and designed in partnership with GADAus partners. They provide environmental, social, economic and demographic data from the Australian Census and other open-form sources. The data categories are:

- recent and historical text relating to the emergencies and disasters the area has experienced
- a written summary of the effects of recent disasters according to surveys and studies conducted in the area

- basic health statistics and studies
- a map of the region with details such as recent disaster history
- disaster statistics of:
    - fatalities
    - impact
    - displacement statistics
    - economic disadvantage statistics
    - housing affordability and homelessness data and statistics
    - local mental health data and statistics
    - gender equality statistics
    - demographic information
    - full references.

Disaggregating the data is essential because, for individuals, disasters can reinforce existing gender inequalities. Gender-differentiated effects of disasters, such as increased caring roles, reduced economic participation and increased post-disaster trauma as well as loss and suffering continue to be a feature of disasters in Australia.[2,3,4] However, these factors can be obscured due to current reporting mechanisms.

Academic thought argues that a gender analysis is crucial to comprehending the differential effects of disasters on communities.[5] Practitioners agree and recognise the need to incorporate gender in disaster planning to enhance community resilience and capacity.[6] Anyone entering a community with assumptions about the people they will meet is working at a disadvantage.

The disaster context sheets are adaptable to other regions as links are provided for each dataset. GADAus encourages others to replicate these data sheets for their own regions. The disaster sheets have also been used to identify areas that require additional grant support and are used as background information in draft submissions. New disaster context sheets can be easily reproduced and, more importantly, are scalable.

By prioritising the dissemination and use of these resources, GADAus is providing crucial support to all areas of Australia, especially those that may have traditionally been isolated and overlooked in disasters.

The disaster sheets reflect the GADAus commitment to provide actionable resources that facilitate informed decision-making and targeted interventions. By equipping people with comprehensive knowledge of their communities, the sheets lay a groundwork for a well-coordinated and effective responses that creates better outcomes for communities. Well-informed recovery workers are better equipped to address the diverse needs and challenges facing communities in the aftermath of disasters. By leveraging the insights provided by the sheets, recovery efforts can be tailored to the circumstances of each community, maximising their effectiveness and minimising potential disparities in service delivery.

Access all the disaster context sheets on the Gender and Disaster Australia website, at https://genderanddisaster.com.au/resources.

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Vale
Roger Trelease Jones OAM

Roger Jones was a visionary leader and trailblazer in emergency management in Australia. He died on 4 April 2024 at the age of 92. He was a pioneer and architect in emergency management, disaster risk reduction, public safety and the prepared community. His loss is felt deeply by his family, community, state and country.

Roger graduated as a teacher and joined the Australian Defence Force in 1956. In the 1970s, he was posted to Canberra to the newly established Natural Disasters Organisation (NDO), now the National Emergency Management Agency, as its first Director, Operations and Plans working under Major General Alan Stretton.

Just 7 months into the appointment, Roger coordinated the evacuation of nearly 45,000 people from the devastated and isolated city of Darwin after Cyclone Tracy in December 1974. He also coordinated the immediate restoration and early reconstruction efforts.

In 1975, Roger joined the NDO's research and training arm, the Australian Emergency Management Institute (AEMI) at Mount Macedon in Victoria, as its first Deputy Director and Chief Instructor. His immediate tasks were to establish a research capability and to develop a new set of emergency management concepts and principles as a basis for curriculum development to replace the civil defence doctrine.

In February 1983, Mount Macedon bore the brunt of the Ash Wednesday fires that raged across Victoria and South Australia. While his family evacuated from the mountain, Roger worked with staff to shelter 300 locals at AEMI facilities during the fire, protecting the evacuees and buildings. Following the fires, Roger worked voluntarily on community clean-up and restoration with the local council.

In 1984, Roger was recruited by the Victorian State Government to write Victoria's first *Emergency Management Act 1986*, an Act which legislated new arrangements for prevention, preparedness, response and recovery in the state. Today, all states and territories have comparable legislation and management arrangements. In 1987, he returned to AEMI as Director and participated in the early planning for the development of a new community-based emergency risk management model. This model is accepted internationally as ISO 31000:2009 – Risk Management: Principles and Guidelines. His pioneering work included emergency management risk as a function of hazard and vulnerability, and the implementation of the widely used concept of prevention, preparedness, response and recovery (PPRR).

In 1994, Roger left AEMI to work as an emergency management consultant undertaking national and international consultancies in emergency management and specialising in disaster reduction and public safety risk management. Roger recognised the need to adapt emergency risk management principles and processes to the needs of communities rather than organisations. He was a strong proponent of 'the prepared community' both in Australia and overseas.

In 2000, he represented Australia in the South African National Council of Provinces Disaster Management Project on behalf of the Australian Development Assistance Bureau. This project resulted in the *South African Disaster Management Act 2003*, which is internationally recognised as the most comprehensive national framework for disaster risk reduction.

Roger participated in the development of the Pacific's contribution to the 2005 Hyogo Conference and was involved in the development of its Pacific counterpart, the Pacific Regional Framework for Action for Building the Resilience of Nations and Communities to Disasters 2005–2015. During that period, he made consultancy visits as a member of the South Pacific Applied Geoscience Commission's Regional High Level Advocacy Team to members of the Pacific Forum to advise and assist in the development of disaster risk reduction and disaster management arrangements and plans.

In Australia, Roger served on various emergency services advisory committees including state and national Australian Red Cross and the Victoria State Emergency Service. He was also involved in many community and charitable activities including the Royal Humane Society of Australasia and, in 2012, was awarded the Order of Australia for his services.

At the age of 88, Roger completed a Master of Philosophy, his thesis titled 'Developments in Australian Emergency Management Theory, Policy and Practice, 1930-2015'. This is the first comprehensive history of the development of emergency management in Australia from its earliest civil defence foundations to the present day.

His legacy and pioneering work in research and development, his publications and development of policy and practice live on and will influence new generations of emergency managers across the country and internationally.

Vale
Brian ‘Hori’ Howard

Much has and will continue to be written about Major General Brian ‘Hori’ Howard AO MC ESM (Rtd) and his extraordinary life. Reflections on his life and service to the community will rightly highlight his operational and leadership skills.

From his early Australian Army career, of which he held a profound fondness, he made a seamless transition into the emergency management sector, firstly as Head of the Natural Disasters Organisation (the forerunner to Emergency Management Australia) then as Director of the NSW State Emergency Service and member of the NSW State Emergency Management Committee. In each of these endeavours, Hori made an enormous contribution, enhancing and improving these organisations through a balance of strategic foresight, commitment, vision and good old fashioned determination.

What’s perhaps a little less known is the contribution Hori made to the way in which relief and recovery is undertaken, both in NSW and across the country. As Head of the NSW State Emergency Service, he not only ensured the organisation’s operational capability but also recognised the importance of relief and recovery activities as well as the critical role of the not-for-profit sector working in close partnership with government to support affected communities affected. This led to the establishment of a memorandum of understanding between the NSW Government and a handful of key agencies, including the Salvation Army and Australian Red Cross, that clearly articulated the roles, responsibilities and expectations of these organisations working in partnership to support communities in need. The legacy of this partnership arrangement remains foundational in the NSW recovery arrangements to this day.

As a proud military man, Hori was aware of and committed to the importance of solid ‘doctrine’ to provide the framework and underpin good practice. To this end, he played an important part in the development of the first *Australian Emergency Management Recovery Manual,* released in the late 1990s. Working as the National Recovery Consultant with Emergency Management Australia at the time, I was advised that Hori would be the emergency management representative on the working group that was established to develop the manual. Hori’s somewhat intimidating reputation proceeded him and the rest of the working group weren’t sure what they were in for! What we got was an energetic and unwavering contributor, whose passion and commitment to the community challenged us to produce a critically important piece of work that had been sorely lacking.

Hori was able to draw on his vast experience on the frontline of emergencies to recognise the importance of the work, then support the expert practitioners involved in drafting chapters on topics as diverse as community-led recovery, restoration of physical infrastructure and the management of public appeals. Renowned for his steely determination and opinions, Hori was also quick to identify areas where his knowledge was lacking and was very good at seeking expertise when required. It could take a while to convince him of your credentials, but once you did, you had an extremely loyal and vocal supporter for life.

Always a great supporter of volunteers, Hori will be remembered for his work in the establishment of the Australian Emergency Management Volunteer Forum (AEMVF). Initially established in 2001, Hori was the inaugural chair and for over a decade used this platform to push for better conditions for volunteers across the emergency management sector. He was a great supporter of the diversity of organisations and volunteers that make up the fabric of the emergency management system. He was also supportive of the not-for-profit sector that he believed deserved far greater recognition and support for its critical contribution to emergency management.

A wonderful legacy of this time is the Volunteer Leadership Program, developed by AEMVF members under Hori’s leadership. From its early days, it was delivered annually at the Australian Emergency Management Institute at Mount Macedon. Today, it has grown to be one of the most important offerings under the umbrella of the Australian Institute for Disaster Resilience and occurs each year across Australia in a variety of regional settings.

Mine is just one of the many stories that emergency management colleagues will share about this talented and colourful personality who had a major role in forging the character and structure of our sector. His legacy is in the policies and practices that take a holistic view of emergency management, encourage an ‘all agencies, all hazards’ approach and put the people – both those affected by and those working in emergencies – at the centre of the picture. By continuing to collaborate and coordinate at every stage of the disaster cycle, we will be working in honour of Hori’s memory and his life work.

Andrew Coghlan

Head of Emergency Services Strategy
Australian Red Cross

Gender & Disaster Australia

Equity and Survival in a Time of Turbulence

Gender and Disaster Australia's 2025 Conference

Monday, 24th March to Tuesday, 25th March, 2025 - MCG, Melbourne

This is an unmissable conference, dealing with the key issues of our time.

Join like-minded people and inspiring presenters to collaboratively meet the challenge of gender equity and survival in the face of climate change. Be part of a transformative dialogue that explores the impact of disasters and the barriers and emerging solutions for women, men, and LGBTIQA+ people.

This conference offers a unique platform for researchers, practitioners, policymakers, community members, first responders and activists to come together and exchange insights, experiences, and best practices in the field of gender and disaster management. Through engaging presentations, interactive workshops, and thought-provoking discussions, attendees will gain valuable knowledge and tools to address the complex challenges associated with gender in the context of climate change and extreme weather events.

Call for Abstracts

We invite you to submit your abstract for presentations, workshops, and posters that align with the conference themes (as below). Or convince us to include your own themes!

Share your expertise, research findings, and emerging - or proven - solutions with a diverse audience from fields of disaster risk reduction, disaster management, disaster resilience, and climate change. People with lived experience are central to understanding the dimensions of the challenge we face, and are urged to submit abstracts.

Conference themes

1. **Equity**

   Explore the critical issues surrounding equal rights and access in disaster management and discover opportunities to create more equitable services.

2. **Survival**

   Investigate the implications of climate change on the survival and well-being of women, men, and LGBTIQA+ individuals.

3. **First Nations people's experience of disasters and emergency planning**

   In this theme, First Nations people will lead sessions both within and outside the constraints of the MCG's 'four walls'.

4. **Other themes and *your* themes**

   We welcome abstracts on other themes, and wait to be persuaded by your own ideas for compelling themes relevant to the focus of this conference.

Please go to our website for full details ▸

genderanddisaster.com.au

Artwork: Between 2 worlds II © Ona Henderson

Important dates:

Abstract submission deadline:
Tuesday 24th September 2024

Notification of acceptance:
Friday 11th October 2024

Presenters to confirm attendance:
Thursday 17th October 2024

Conference registrations open:
Friday 25th October 2024

Conference date:
Monday 24th March to Tuesday 25th March 2025

Submit your abstract

- Please submit your abstract/s to the following email address: conferences@gadaustralia.com.au by Tuesday 24th September 2024, and include the following information:
- Author/s name, primary email address and phone number;
- Lived experience, institutional or organisational affiliation/s, other;
- Relevant theme;
- Title and/or topic of abstract; and,
- Abstract attached as a Microsoft Word document (limit of 300 words).

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