



WPI

Evaluating the Effectiveness of In-Person and Online Gender-Based Disaster Response Training in Australia

An Interactive Qualifying Project

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[Project Website](#)

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We acknowledge the traditional owners of the land on which we live and work and pay our respects to their Elders past and present. We understand that Indigenous sovereignty was never ceded.

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Authorship

The report was written and edited by all members of the group. Each section/ subsection had an original author and then was reviewed and edited by the team as a whole. The Introduction was mainly written by Emma; Background was mainly written by Jacob and Emma; the Methodology was mainly written by Grace; Findings were equally authored by all members, and Recommendations were mainly written by Natalie. Charts and analytics were created by Grace. The video was mainly produced by Jacob. Visuals and the appearance of the booklet were mainly Grace and Emma.

The report was also edited with assistance from Professors Carrera and McCauley.

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Abstract

The goal of this project was to evaluate the effectiveness of Gender and Disaster Australia's *Lessons in Disaster* training program, both online and in-person. We analyzed past participant evaluations and supplemented this with participant interviews. Additionally, interviews with GADAus staff were conducted to determine the staff's opinions on both delivery methods. We found that the online training was just as effective as in-person training, and in both environments, participants found discussions, activities, and exercises to be the most useful parts. Based on these findings, we recommended using both delivery methods while maximizing participant involvement going forward.

Executive Summary

The executive summary was created as a booklet, which can be viewed alongside our project in the IQP project database.

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1. Introduction

Disasters cause immense physical damage to structures and lives, but one perspective that we often do not hear about is the gendered experience in disaster. Australia in particular experiences bushfires, heatwaves, droughts, earthquakes, and other events throughout the country. Gender inequality and harmful gender stereotypes exacerbate the negative impacts to individuals before, during, and after disasters. Women, who are often seen as the caretakers of the home, “dramatically expanded caregiving roles following a disaster and [put] family needs before their own”, leading to a decline in emotional well-being. Current gender norms and societal inequalities equip women with scant resources and autonomy to survive disasters. As a result, women and other vulnerable groups are significantly more likely to die both during and after disasters than men (Parkinson, 2022). Conversely, “men who had traditionally been the family providers and protectors struggled with...feelings of inadequacy and failure” in the wake of these disasters (*Gender and Health in Disasters*, 2002). The harmful effects of gender stereotypes during disasters result in an increase in violence and marginalization toward women as well as an inadequate response to the needs of men and LGBTQIA+ people.

Gender and Disaster Australia (GADAus) aims to understand and address how gender and sexuality intersect with disaster response. GADAus conducts research and learns from the lived experience of men, women, and LGBTQIA+ people to accomplish their mission of using evidence-based policies and resources to inform emergency management systems throughout Australia of the gendered implications of disaster response. To do so, they created a training curriculum designed for Emergency Management (EM), government, and community organizations. These *Lessons in Disaster* training sessions were conducted throughout the organization's history and included sessions about LGBTQIA+ pressures following disasters, men's struggles, and general gendered experiences of disaster.

Due to the COVID-19 pandemic, GADAus' training sessions were reconfigured for online learning using video-conferencing technology. There has been a broad examination of the effectiveness of online learning, specifically within the medical and academic fields, as the pandemic pushed all education online to some extent. Such research has emphasized the benefits and drawbacks of each style of learning. For GADAus, the online format's main challenge has been maintaining the level of participant engagement typical in face-to-face sessions. However, online sessions have allowed GADAus to easily connect with more people and develop new opportunities for the delivery of focused video content.

Throughout the history of these sessions, in-person and online, evaluation and participant feedback have remained positive, but have not been evaluated thoroughly. Recently, GADAus received funding to expand its operations from Victoria to all of Australia, and while GADAus has extensively researched the impacts of gender inequality in disaster response, the combination of expansion and the opportunities and challenges presented by a new mode of delivery have raised the need for an evaluation of the efficacy of their training, as well as differences in delivery methods.

The goal of our involvement was to analyze which aspects of GADAus' online and in-person training sessions are most effective in equipping participants with the tools to handle disaster response viewed through a gendered lens. To do this, we examined past-participant evaluations of both in-person and online training sessions, obtained from their database dating back seven years and two years, respectively. Our group also interviewed participants, senior emergency service employees, and GADAus staff and associates to collect information on the overall effectiveness of the training. Alongside this report, we produced a promotional video for

GADAus' website about its training programs. This information and content will allow GADAus to optimize training and continue to enact cultural change as it relates to the gendered impacts of disasters and disaster response throughout Australia.

2. Background

The effects of climate change have drastically increased the severity and damage of disasters. According to the Australian Institute for Disaster Resilience (AIDR), rising temperatures are leading to:

- A greater cadence of more intense heat waves.
- An increase in the occurrence and magnitude of flash flooding
- Fewer, but more severe, cyclones.
- A longer, more intense, and more destructive fire season (*Natural hazards and climate change*, n.d.).

These disasters are predicted to further escalate, perpetuating the damage done to Australian society and its people. For emergency response training to be effective and successful, it is not enough to simply know *what* disasters affect the Australian people, but *how*. In addition to the difficulties caused by the physical destruction, there are detrimental pressures put on men to be the hero and on women to take care of the children while relying on the men.

The Black Saturday Bushfires are a recent and terrible example of the damage caused by disasters in Australia. From February 7th to March 14th, 2009, approximately 400 bushfires raged across the Australian state of Victoria (National Geographic, n.d.). The fires burned over 4500 km² (1,740 mi²) of land, caused 1.01 billion AUD (714 million USD) in damage, injured 414 people, and killed 173. The Black Saturday Bushfires are the deadliest bushfires to date, making it an event in Australian history that will forever live in infamy (National Museum Australia, 2022; *Bushfire - Black Saturday, Victoria, 2009*). In the wake of the fires, Country Fire Authority (CFA) saw 50,000 Victorians participate in fire preparation meetings. Commenting on the spike in attendance for these meetings, CFA chief executive Mick Bourke said:

“These record attendance figures show how communities have taken on a strong commitment to be informed and ready for this bushfire season...This spike in attendance at these meetings is an encouraging sign people understand they must prepare and develop their personal bushfire survival plan well in advance” (Fire fears prompt action, 2009).

Climate change plays a role in causing bushfires, yet many in Australia recognize that it is the actions of people that exacerbate the intensity and destruction of bushfires; therefore, it is everyone’s responsibility to manage and reduce disaster risk. While this individual responsibility applies to everyone, it does not affect everyone in the same way due to gender and sexual identity. After Black Saturday, director of GADAus Debra Parkinson remarked:

“For a lot of men being in control is part of the way we construct masculinity and they didn't have control on Black Saturday. Often they lost their jobs so they didn't have control over their workplace anymore so the one place that they thought they could exert control was within the home...One man said people would say, 'Why haven't you gone back to work, why haven't you got the house rebuilt, why haven't you got your family rehoused?' So the expectations on men were high and many felt that they should have done more to save people” (Stark, 2015).

Additionally, women are traditionally expected to stay home, take care of the house and family, and let the man handle the danger during events like this. Therefore, both during and

after the fires, many women found themselves hindered in taking action as they were unprepared to act when their husband or significant other did not come home. Through understanding how different genders experience and respond to disasters, the efficacy of GADAus training can be evaluated and used to develop more refined programs, as well as to encourage others in Australia to participate in learning how they can best help themselves and those around them in disasters.

2.1 Gendered Impacts of Disasters

To understand how different genders experience and react to disasters and their response strategies, one must first understand the context of disasters, disaster response, and gender/sexual identity in Australia. By analyzing the progress that has been made in these areas and identifying opportunities for improvement, more effective and impactful training can be developed, allowing the Australian emergency response sector to better take care of survivors.

2.1.1 Disaster Response Strategies in Australia

The frequency and intensity of disasters in Australia, coupled with the physical, mental, and emotional damage caused to the Australian people, has propelled the Australian Government to develop a national disaster response plan with a focus on individual education, awareness, and responsibility. AIDR, in partnership with the Australian Government National Recovery and Resiliency Agency, has created a vision and goal for disaster risk reduction: by 2030, AIDR hopes to “actively reduce disaster risk and limit the impacts of disasters on communities and economies” through increased accountability, risk-informed decisions, and investing in preventive measures. AIDR and the Australian government hope to reduce existing and future risk on the individual level and provide decision-makers with the resources they need to do the same (*National Disaster Risk Reduction Framework*, n.d.). The Australian Government has four national priorities for achieving these goals:

- *Understand disaster risk* through investment, engagement, and awareness.
- Make *accountable decisions* that incentivize and encourage adaptable emergency risk management practices.
- *Enhance investment* in government, commercial, and individual efforts towards disaster risk reduction initiatives, education, and awareness.
- Develop a national framework based on *governance, ownership, and responsibility* that guides and oversees disaster risk reduction efforts on the local level.

This strategy of proactive individual responsibility for managing and reducing disaster risk is not reflective of people’s actions however. Ruth Beilin and Jana-Axinja Paschen, researchers and professors at the University of Melbourne, investigated the political and social contexts in which the disaster response strategy of shared responsibility exists. From their research, they discovered that citizens exercised their responsibility in two ways: reactively and relationally (Beilin, R, 2021).

Those with reactionary actions to disaster risk management only take action when prompted by government policy, doing what is normal and expected of them. Conversely, relational reactions to disaster response aim to “confront standardized expectations from centralized management, re-negotiating these through multiple lenses...[with a] focus on everyday circumstances and community-led agency” (Beilin, R, 2021). Transformational and

relational approaches, rather than stagnant and reactionary efforts, are the goal for disaster response, yet this is where issues occur with the government's disaster response strategy – citizens take the reactionary approach not because they choose to, but because they feel they have to. A lack of information, combined with increased risk and uncertainty from living in fire-prone areas, has left many feeling “not response-able rather than irresponsible” (Beilin, R, 2021). For disaster response training and action to be effective, citizens need to feel empowered, confident, and knowledgeable in their ability to prevent disasters (or how to act when in one) without feeling pressured that the responsibility of keeping their communities safe falls solely on them.

2.1.2 Effects of Detrimental Stereotyping in Increasing Post-Disaster Violence

While Australia's disasters and response strategies affect its entire population, the Australian people are not all affected in the same way. Gender and sexual identity impact how people perceive and cope with disasters, before, during, and after they occur. Traditionally, men are expected to be the protectors and saviors whereas women are expected to take care of the home and children, being seen as vulnerable and needing protection. Both of these constructs are not only false but also extremely damaging to people's physical, mental, and emotional health.

During disasters, “men need to feel like they're saving their family, and when they cannot do that they often suffer a crisis of masculinity” (Stark, 2015). The antiquated notion that men are the “head of the household” not only instills them with a false and baseless notion that they are solely responsible for their loved one's safety, but also places an unrealistic burden upon them, even though they are not at fault. Coupled with modern-day stigmas regarding mental health, men often feel isolated and alone in their struggles which manifest themselves in unhealthy and harmful ways that hurt those around them. For example, the pressures of COVID-19 have caused a 60% increase in the frequency of family violence against many marginalized groups (Pfitzner et al., 2020; Respect Victoria, n.d.).

A Canadian study analyzed couples' experiences before, during, and after the Red River Valley Flood. Before the flood, the women took on the role of preparing the home where the men were more likely to brush off the need for preparation, resulting in needing to replace belongings. Overall, the women did “behind the scenes” labor that was crucial to the flood response - bringing food to the men, caring for neighbors' children so more women could go help, and asking for help from the government – but felt their contributions were overlooked due to the invisibility of their efforts. Conversely, the men's work of piling sandbags was more visible as a way to help the situation. Furthermore, the women were the ones on talk radios advocating for government aid, which perpetuated existing stereotypes about men as protectors being unable to ask for help. While the couples that were interviewed for this study did not have issues with domestic violence, some did report more disagreements following the flooding. In a case where the husband made the decision for the family, the wife reported that it was eye-opening, “He's not taking me seriously. . . It wasn't a big deal before the flood. Now it is,” (Enarson & Scanlon, 1999).

The book *Beating the Flames: Women escaping and surviving Black Saturday*, published by Women's Health Goulburn North East, details 21 women's experiences on Black Saturday. A common theme among the accounts is that when faced with their mortality, these women didn't wait for a man to help them – they acted and took their own lives and the lives of those around them into their own hands. One account accurately represents and summarizes the effect of harmful gender roles on people, as well as the actions of the women that day:

“[He has a] lot of guilt that he wasn’t there helping me. He couldn’t do anything because of the enormity of the fire...The women had a big job that day, making all the decisions...they were active agents in their survival and the survival of partners, children, parents, friends, neighbors, and strangers. The concept of the warrior woman [was] made flesh in each of the accounts” (Beating the Flames, 1-5, 2011).

The aforementioned gender stereotypes occur and cause much harm, however “men and women [react] to life and death situations as individuals, rather than along gendered lines” and it is the lack of information about these stereotypes that causes the violence, not individuals (*Beating the Flames*, 1, 2011). Through the research of GADAus and actions taken by people, the harmful gendered effects of disasters can be uncovered, understood, and deconstructed to develop new disaster response methods and better educate the EM sector in dealing with the personal effects of disasters.

2.1.3 Post-Disaster Violence Against Women and LGBTQIA+ People

Even when they are over, disasters continue to affect survivors: many people lose their homes and need shelter, families become separated, and people can be forced into less accepting environments. This puts women and members of the LGBTQIA+ community especially at risk after disasters since they are often the victims of increased sexual assault, rape, and domestic violence (Stark, 2015).

Women who “survive but are widowed are more vulnerable and the stigma of being a single female... means many are reluctant to queue for emergency aid or seek medical treatment” (Stark, 2015). Similarly, “60% of young LGBTQIA+ people experience verbal homophobic abuse, and 20% experience physical abuse. Almost half hide their sexual orientation or gender identity in public for fear of violence or discrimination” (Parkinson et al., 2018). This discrimination, harassment, and abuse cause women and LGBTQIA+ people to fear seeking help after disasters, exposing them to further harm.

Furthermore, trauma and the situations of shelters put women and minorities at greater than usual personal risk. Many victims are forced into temporary housing, such as evacuation shelters and displacement camps. Experiencing housing insecurity is a risk factor for gender based violence, as it leaves potential victims of violence easily accessible by perpetrators (Thurston et al., 2021). An example of this was in Bangladesh where cyclones are prevalent and leave women as easy targets for those who wish them harm in shelters, during evacuation transport and while collecting aid. One survivor shared her experience: “The shelter is not safe for us. Young men come from seven or eight villages. They even tease [verbally harass] girls and young women. They try to touch or molest them. I feel frightened to stay in the shelters. I stay at my house rather than taking my teenage daughter to the shelters” (Rezwana & Pain, 2021). This is both an example of how a change in environment can enable gender based violence, and why a gender-based response is necessary.

2.2 Gender and Disaster Australia (GADAus)

Global literature links disasters to increased violence against women. Following Black Saturday, Parkinson and Zara conducted the first research of this kind in Australia, leading to the formation of the Gender and Disaster Pod. Now named Gender and Disaster Australia (GADAus), they have carried out surveys, interviews, and studies to better understand the experiences of survivors and need for gender-based emergency management. GADAus designed

comprehensive training modules to attempt to improve emergency responses. GADAus has been primarily based in Victoria, Australia, but recent government funding has allowed them to begin expanding across the country. This training began in-person, but were forced to move online due to the global pandemic. This section details GADAus' founding, current work, and training modules.

2.2.1 GADAus Founding and Mission

Gender and Disaster Australia originally began as a joint venture between Women's Health Goulburn North East (WHGNE), Women's Health In the North (WHIN), and the Monash University Disaster Resilience Initiative (MUDRI). WHGNE and WHIN are both feminist organizations that aim to achieve long-term gender equality and improve the health, safety, and wellbeing of women and LGBTQIA+ people by addressing and changing harmful gender norms and practices through resources and training. MUDRI utilizes the expertise and resources of Monash University in Melbourne to strengthen community resilience during disasters through disaster preparedness and management training.

In 2015 Women's Health Goulburn North East (WHGNE), Women's Health In the North (WHIN), and the Monash University Disaster Resilience Initiative (MUDRI) established the Gender and Disaster (GAD) Pod to raise awareness about the impact of gender roles in disasters, and to use these insights to help develop new emergency practices and disaster response techniques. GAD Pod's founders, Debra Parkinson and Claire Zara, were previously involved in WHGNE's research regarding the Black Saturday Bushfires. Parkinson and Zara conducted interviews with survivors of the fires to help determine more inclusive response strategies for the future. Patterns emerged through these interviews, including an increase in violence against women and the pressure on men to not seek help (Parkinson, 2017). These findings, coupled with expertise from parent organisations, formed their mission: to "Promote an understanding of the role played by gender in survivor responses to disaster... and to embed those insights into emergency management practices" (Gender & Disaster Australia, n.d.). Eventually becoming Gender and Disaster Australia, the organization continues GAD Pod's mission and builds on projects initiated by WHGNE. Combined with the expertise of WHIN and MUDRI, GADAus also researches how LGBTQIA+ people experience disaster through the combination of gender, gender inequality, sexual diversity, and gender diversity.

2.2.2 GADAus Research

The comprehensive training programs that have been compiled by GADAus were created using research on the gendered impacts of disasters. Parkinson's research addressed the link between disasters and family violence, which had previously not been quantified. Other topics include LGBTQIA+ people's experience with disaster, women's experiences within emergency management, and how gendered expectations affect both men and women negatively.

Investigating and preventing the increase in family violence post-disasters is an integral part of GADAus' training and research. In the aftermath of Black Saturday, Parkinson and Zara conducted interviews with 30 female survivors and found that among them, 17 experienced domestic violence, the cause of which they attributed to the fires (Parkinson, 2017). This research was the first of its kind as previously there had been no studies to link or quantify family violence and disasters in Australia. A continuation of these interviews was conducted several years later and concluded that increased domestic violence was still apparent, according to the women interviewed and members of police, government and social work (Parkinson,

2017). Due to their vulnerability in and after disasters, many women are not comfortable reporting family violence as they fear retaliation if they speak out. Additionally, they may not be aware of the resources available to them for help. This results in high rates of underreporting when it comes to domestic violence and assaults, which contributes to the lack of accurate statistics that reflect the increase in violence post-disaster. Through this research, GADAus continues to work towards more awareness and prevention around family violence and the gendered effects of disasters.

GADAus has also identified the lack of women in emergency response positions, especially positions of power. In a 2016 study, GADAus aimed to understand the composition of genders within emergency response organizations, as well as to understand the opinions of employees on gender in their workplace. The study looked at the six organizations including Ambulance Victoria (AV), the Country Fire Authority (CFA), Emergency Management Victoria (EMV), Emergency Services Telecommunications Authority (ESTA), Metropolitan Fire Brigade (MFB), Victoria State Emergency Services (VicSES). The distribution of employee gender varied through all the organizations, as shown in Figure 1.

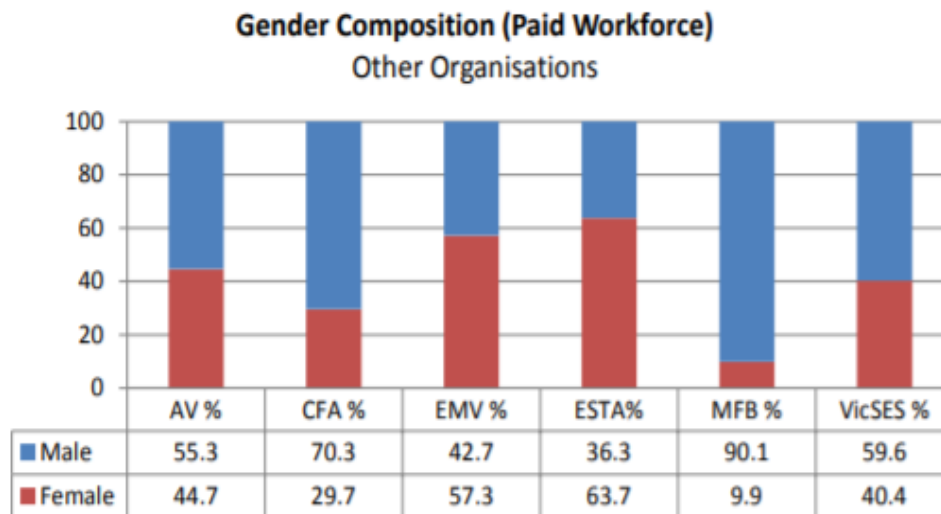


Figure 1. Gender Composition in the Emergency Response Sector This bar graph illustrates employee gender distribution across six organizations in the Australian emergency sector. (Parkinson et al., 2016)

From the study, it was found that only 20% of all leadership positions were held by women (Parkinson et al., 2016). Focus groups and survey questions further revealed gender disparities in opportunities within the workplace. Personal experience from women interviewed revealed that they were held to a higher standard in the workplace and were often given administrative roles rather than fieldwork (Parkinson, et al., 2016). Improved inclusion and equity of women in the emergency response sector would result in better resources and support for those impacted by disaster. Identifying these patterns in gender disparity in the emergency response workforce allowed GADAus to incorporate suggestions for the organizations participating in their programs.

Research about LGBTQIA+ people’s experiences relating to the emergency management sector has also been conducted. In a survey of over 100 emergency management (EM) personnel and 12 LGBTQIA+ people in 2018, GADAus found that 74% of EM respondents were not aware of any policies or training sessions on providing emergency services to LGBTQIA+ people; 31% of EM respondents observed colleagues making homophobic and/or transphobic remarks at the

workplace; and 52% of LGBTQIA+ respondents agreed that there is a greater risk of harassment and abuse during emergencies (Parkinson et al., 2018). The study defines itself as indicative and illustrative rather than representative due to respondent sample sizes. Of the 33 LGBTQIA+ participants who began the survey, only 12 completed it. This was likely because people in this group do not feel comfortable speaking about the topic, which itself exposes a clear shortcoming of disaster response in Australia, specifically for LGBTQIA+ people.

2.2.3 GADAus Training Programs

The extensive research on the gendered impacts of disasters and response have been incorporated into three GADAus programs: *Lessons in Disaster*, *Lessons in Disaster: Train the Trainer*, and *Under Pressure: LGBTI – Inclusive Emergency Services*. GADAus staff and associates delivered this training in-person from 2015 to 2019, which focuses on properly dealing with family violence and the pressures placed on men after disasters, to teach how to challenge harmful gender stereotypes. Additionally, the programs explain how to develop and implement disaster response strategies that address gender inequalities, including family violence, in the emergency management sector. The *Train the Trainer* package certifies individuals to deliver the *Lessons in Disaster* module to others. The module includes in-depth articles, videos, and podcasts to understand the material. To obtain certification, a workshop must be completed after understanding the informational content. Finally, *Under Pressure* focuses on the harmfulness and inefficiency of equality, rather than equity, regarding disaster response. This module, created by social policy expert and LGBTQIA+ advocate Liam Leonard, is intended for all members of emergency services, from senior leaders to front line workers, as well as local government and anyone interested in emergency response management and LGBTQIA+ inclusive professional practice.

With the onset of online learning due to COVID-19, GADAus reconfigured their in-person programs into five training modules: *Under Pressure*, *Working for Change*, *The Disaster Made me do it*, *The Impact of Gendered Expectations on Disaster Experience for Women and Men*, and *Gender and Disaster: the Evidence*. The training focuses on:

“local and international research into family violence following disasters, and research into the challenges faced by men in the context of disasters. The policy and practice implications for identifying and responding to family violence are examined and participants are challenged to take action to address gendered stereotypes which are harmful to women, men and children’s healing and recovery following disaster. The training offers participants the opportunity to formulate new and proven actions as individuals, community members and within their organisations which respond to family violence and which challenge harmful stereotypes which limit people’s recovery” (Organizational CV, Gender and Disaster Australia, 2021)

Figure 2 shows the distribution of participants by organization who attended GADAus’ online training in 2020.

Number of Members from Organizations That Have Participated in GADAus' Online Trainings

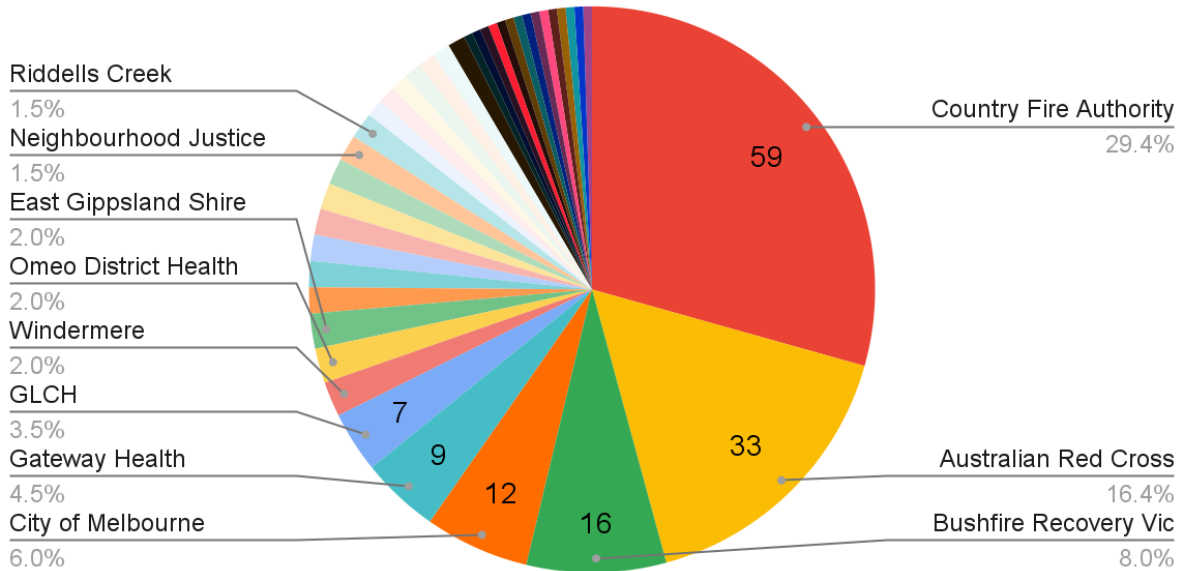


Figure 2. Organizations that have participated in GADAus' online training. This pie chart illustrates the number of members from various organizations that attended GADAus' online trainings in 2020, compiled from their survey data.

These training programs emphasize the need for a gendered lens on emergency response and educate participants on techniques and resources available to them. In addition to its research and training programs, GADAus also participates in annual conferences dating back to 2012. These conferences are in partnership with similar organizations focused on disasters and family violence, men and disasters, diversity in disaster, and gender justice. Through its extensive work, GADAus is working to create real cultural change regarding these topics and continue to improve the emergency management sector.

2.3 Online vs. In-Person vs. Hybrid Delivery Comparisons

The substantial number of in-person resources that GADAus provides had to be adapted to online formats due to the COVID-19 pandemic. In early 2020, everyone in the world was forced to restructure their lives as a result of the highly contagious virus. Some of the earliest advice was to cancel any and all in-person gatherings, stay home, and distance from others. A distinct difference from pandemics past, however, was the existence of the internet, which allowed many canceled gatherings to move online. While work from home became widespread, stories of schools moving online appeared in headlines frequently. In May of 2020, 97% of Victorian children in state-run schools attended classes online (Sacks et al., n.d.). Other types of education were also forced online, including medical training and training for emergency responders.

2.3.1 Comparisons within the Academic Setting

The training workshops and conferences described above were amongst the many programs that had to switch to online platforms. In doing so, a varied range of benefits and drawbacks became apparent, similar to patterns found in the academic setting. Benefits include cost-effectiveness, flexibility, accessibility, and new modes for the delivery of information (Scott et al., 2016). Online learning offers the flexibility to complete assignments at any time; however, this would not apply to the discussion elements incorporated into GADAus' training. On the other hand, the ability to complete the training from any location would allow for more participants to get involved in the sessions. These factors could prove beneficial for the expansion of GADAus to the entire country.

The organization has also reported the ability to produce new video content that is more suitable for the online environment. In a high school setting, it has been suggested that high school students learn just as much, if not slightly more due to the flexibility of online learning (Means et al., 2013). However, this study did not address the learning of complex or difficult emotional topics which GADAus handles, and the subjects were much younger than typical participants in disaster training. When applied to the evaluation of training for suicide prevention, researchers found that online participants gained more knowledge compared to those who received face-to-face instruction. These findings were consistent for all age groups (Scott et al., 2016). This study was based on a full online curriculum that did not include interaction between other participants, which allowed each person to move at their own pace.

Research on the effectiveness of online learning has also exposed some drawbacks, including a lack of engagement from participants and a decreased ability to connect with others. The online setting makes it less common for participants to engage or pay attention to the content that is being presented to them. The study on suicide prevention training notes that although the online scores were higher than in-person, the participants were highly-motivated with specific learning goals (Scott et al., 2016). This could pose an issue for participants in training that is required by their organization, who may not have a personal desire or belief that the information they are learning is valuable. The nature of gender and sexuality training also requires a connection to the people who experience those issues; thus discussion and personal stories are a valuable part of the training. Additionally, it has been suggested that students need close teacher contact when learning complex material, which is reduced in an online setting (Singh et al., 2021). The combined factors of increased student-instructor distance and the complex issues discussed in GADAus training could decrease a participant's retention of information. In a study that compared in-person to blended learning, students had the same baseline knowledge in both cases; however, the students in the traditional classroom learned more overall (Karam et al., 2014).

2.3.2 Effectiveness of Hybrid Delivery Models

Over the last couple of years, education models have adapted to online and hybrid learning formats. A blended, or hybrid, learning style consists of a base in-person curriculum with online elements that enhance topics learned in-person (Singh et al., 2021). The online portion contains additional material to further explore the topic. Studies have shown that blended learning can effectively combine online and in-person learning, mitigating the drawbacks and capitalizing on the benefits. The effectiveness of blended learning must meet or exceed that of other modes, such as traditional face-to-face learning or online learning, to be considered a viable option. One study, which compared online and blended learning, found that blended

students scored an average of 7.09 points higher than online students on a 100-point scale (Drysdale et al., 2013). However, effectiveness cannot only be measured with test scores, especially in the context of training where the successful application of learned techniques is the ultimate goal. There has been extensive research on blended learning specifically within the nursing and medical training fields. In a study focused on training techniques for midwives in Ethiopia, the hybrid model had similar retention rates to the traditional, but blended learning was more cost-efficient and sustainable (Yigzaw, 2019). Notably, the hybrid program required fewer trainer-hours, which helped the organization conserve resources and reach a larger audience. Like online and in-person training models, hybrid learning has its own unique set of benefits and drawbacks. However, a comprehensive blended model can optimize the benefits of both formats with the proper implementation of online aspects.

3. Methodology

The goal of this project is to evaluate Gender and Disaster Australia's Gender-Based Disaster Response training programs, both in-person and online, and provide recommendations. The following objectives guided our work:

- To assess the effectiveness of past GADAus training on individuals.
- To determine the impact of different delivery modes of training.
- To aid GADAus in expanding their training to all of Australia through recommendations and promotional video materials.

The scope of this project focused on the Lessons in Disaster training modules that Gender and Disaster Australia has provided throughout the state of Victoria, located in Southeast Australia. GADAus has been offering training since 2015, which includes five years of in-person and two years of online training sessions. We collected and analyzed feedback from participants of training and conferences from both of these delivery modes. Figure 3 details the scope of their training programs, including organizations that they have partnered with and the locations of individual participants. Participants of all training sessions are encouraged to fill out an evaluation form after their training program has been completed, which GADAus has archived. This participant evaluation data dates back to May 25, 2015, and May 19, 2020, for in-person and online sessions, respectively. Our involvement with the organization began in January of 2022, with interviews taking place between March 22, 2022 and April 22, 2022.

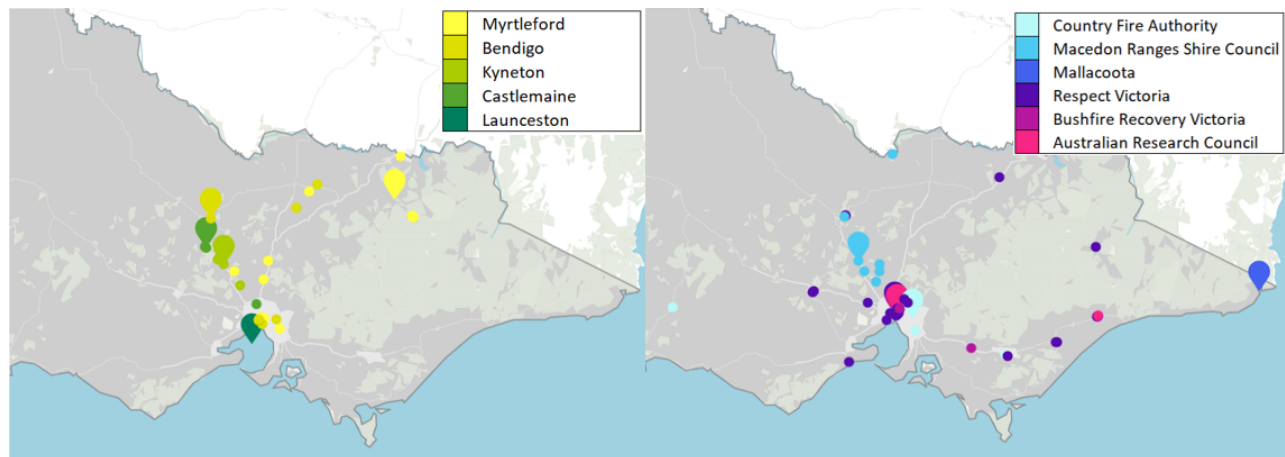


Figure 3. *Organizations and Participants of GADAus Training Sessions throughout Victoria.* These maps detail the scope of GADAus' training sessions. The larger pins represent towns that hosted training sessions, and the smaller dots represent the employer location of each participant, color coded based on what session they attended. The left map corresponds to in-person data from May 2015 to 2018 and the right map corresponds to online data from 2020.

This project and the work with Gender and Disaster Australia involve many sensitive topics that require definitions.

- A *disaster* is a serious disruption of the functioning of a community or society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope with using its own resources (*Risks and Disaster*, n.d.).

- *Gender stereotyping* is the practice of ascribing to an individual woman or man specific attributes, characteristics, or roles only because of her or his membership in the social group of women or men (OHCHR | *Gender Stereotyping*, n.d.)
- *Gender-based violence* is any type of violence that is rooted in exploiting unequal power relationships between genders
- *Domestic and family violence* is violent, abusive, or bullying behavior or actions towards a partner to scare or control them (*What Is Domestic and Family Violence?*, n.d.)
- *LGBTQIA* is an acronym that stands for lesbian, gay, bisexual, transgender, intersex. Often there can be a Q at the end to stand for queer, or A+ to include other non-named identities. More broadly all variations of this acronym are used to “describe diverse groups of people who do not conform to conventional notions of male and female gender roles” (*Lesbian, Gay, Bisexual, Transgender and Intersex (LGBTI) Persons - UNHCR|Emergency Handbook*, n.d.)

In this chapter, we describe the methods used to achieve our objectives. First, we demonstrate how we analyzed GADAus’ existing evaluation data from past participants to evaluate individual effectiveness. We then explain how we collected additional feedback for the in-person and online training sessions. Next, we describe the evaluation methods for determining the long-term impacts of the training programs. Finally, we explain the tools we used for the development of the promotional video for GADAus to help them in their goal of expanding.

3.1 Assessing Effectiveness of Past GADAus Training on Individuals

In order to understand the strengths and weaknesses of the training sessions in regard to each individual participant, we analyzed existing post-training evaluations and conducted interviews with past participants. The following subsections will detail our process for analysis and interviews.

3.1.1 Analyzing Past Participant Surveys

Following GADAus’ trainings, participants completed a questionnaire. The first category of questions was to quantify and self rank their knowledge of the basis of the program before and after. Similarly, their attitudes and opinions about the importance of the training were quantified using Likert Scales of satisfaction and modified versions. This scale typically gives 5 options ranging from strongly disagree to strongly agree, modified versions ranged from not at all to very valuable and similar wording to match the question, some versions also used scales of 1-10 or a simple yes/no. Self-evaluations were also used by researchers at Kennesaw State University, who combined Likert scales about perception surrounding child victims of exploitation with a self-assessment of how educated they believed themselves to be about the subject. Their goal was to grow awareness and support for child victims of commercial sexual exploitation among child protective service employees (McMahon-Howard & Reimers, 2013). The goal is for the self-ranking of their knowledge of the subject to increase pre-to post-training and for the attitudes to be more positive. Similarly, the Department of Psychology at the University of Granada, Spain uses agreement questions and Likert scales to determine the attitudes of students surrounding LGBTI+ subjects before and after inclusivity training (Morales-Rodríguez, 2021). The final type of questions was open-ended short answers that give the participant more freedom in their feedback and can be used for suggestions and determining what works and what was disliked during the training. The full list of these questions can be found in Appendix A.

We first digitized and then analyzed these surveys. There were surveys from roughly 70 different organizations across Victoria ranging from the Victorian Aboriginal Community Controlled Health Organization Inc. to Victoria police and firefighters. There were surveys from five different face-to-face training sessions and over 10 online sessions. These surveys were compared to look at trends over time, differences between training sessions, depending on trainers, the topic of the session, the organization of participants, and differences between online versus in-person sessions. Participants self-rated their knowledge of the session's topic before and after, which were then plotted to see trends across different trainings. Similarly, participants rated how valuable they thought the training was which we were able to compare across all the various sessions and delivery methods.

We coded through the comments from 274 online and 50 in-person respondents to identify patterns across training sessions. The coding focused on responses to two main questions with the following categories that organized the main topics brought up in comments:

1. What was the most useful thing about today's training?
 - Involvement, which includes discussion, practical exercises, and activities.
 - Personal experiences, which included photos, videos, survivor stories, and case studies.
 - Data which included statistics and research presented.
2. What could be improved?
 - More involvement, which includes discussion, practical exercises, and activities.
 - More information, which includes data, research, and strategies to use in their specific workplace or community.
 - Less information, which includes data and research.

A third question, "What additional information or training would you like?", was coded for the online comments. In-person feedback forms did not ask this question. The categories included more general information, which includes additional data and research; more concrete action steps; and more GADAus training sessions.

3.1.2 Interviewing Participants

Individuals are often the best gauge of success based on their opinions about the program. During the interviews with participants, questions ranged from self-identifying how much they learned during the training to how satisfied they were with their experience (McMahon-Howard & Reimers, 2013, Morales-Rodríguez, 2021). Interviews are a more involved and open-ended form of collecting data than the previously discussed surveys and questionnaires. For this project, we used the semi-structured interview approach as described in an evaluation brief created by the Centers for Disease Control and Prevention so that the interviews are all similar but allow for the interviewee and interviewer more freedom during the process to gain more information (*Collecting and analyzing qualitative data | Epidemic Intelligence Service | CDC, 2019*). Another layer of open-ended questions asked about their experiences with disasters before and after the training to gain insight and connection with these groups of people. More specific questions about how engaging they found the session, and their opinions on their trainer, in particular, were also discussed. Participants in this section were first contacted through email, then interviews were conducted online and in-person. A shortlist of people was suggested by our sponsors, then an additional ~10% of all participants from a particular session were contacted.

This method of contact was unsuccessful which resulted in a second email going out to ~300 people directly from our sponsor on our behalf. From this method of contact, we got seven responses and were able to conduct three interviews. All questions asked to past participants can be found in Appendix B, and the list of participants interviewed can be found in Appendix D. These interviews were able to supplement the information gained by the participant evaluations.

3.2 Determining the Efficacy of GADAus Training based on Different Delivery Modes

Assessing the impact of GADAus' training sessions on individuals is important in determining the baseline knowledge on the overall effectiveness of the program; however, it is also important to gather data on the differences between delivery modes from the perspective of GADAus staff and associates. To do so, interviews with GADAus trainers were conducted. These interviews took place in April 2022 and followed the semi-structured format. To contact all of the interviewees we sent out an email summarizing our project and introducing ourselves, with a link to a form to fill out with questions about if they will participate then if they are comfortable with video recording or audio recording that is solely for our use. Due to the nature of the ongoing pandemic, we conducted some of our interviews online and others in-person in office space provided by GADAus and their founding organizations. Interviews with five GADAus staff members were initially done on Zoom, and then follow up questions were asked in-person to film content for the promotional video.

We also asked the GADAus trainers to share their experiences with conducting in-person and online sessions. The trainers were first asked about their qualifications and experiences in this field. Then, about how interactive they felt the training sessions are, their opinions on how the information was conveyed, overall strengths and weaknesses. Then finally about the future and goals of the program. These practices were based on research done by the University of Melbourne that is attempting to improve primary and secondary schools' systems of promoting social and emotional learning while preventing gender-based violence. (Cahill et al., 2019). The questions asked to GADAus staff can be found in Appendix C.

The comments by the GADAus staff were analyzed similarly to the participant comments in order to find trends then support those with quotes.

3.3 Developing Promotional Content for the Expansion of GADAus

Our final objective was to create a video that promoted GADAus' training programs with clips from our interviews and comments from participants for GADAus' website. To do so, video and audio recordings were captured during interviews, stored in our Google Drive and exported to Adobe Premiere Pro for editing and publishing. Written quotes from participants were also taken from the evaluation data provided and overlaid with images. This video produced a compelling narrative about the impact, effectiveness, and importance of GADAus' work. This was then used to promote their work and training on their website as they are starting to expand to the rest of Australia.

4. Findings and Analysis

Our group analyzed both qualitative and quantitative data that was provided in past participant evaluation forms. This data, along with interviews with past participants, highlighted aspects that could be amplified or improved throughout the training. Additionally, interviews with staff identified the benefits and drawbacks of the online training from the organization's perspective. This section details feedback from both participant and staff perspectives.

4.1 Impact of Training on Individual Participants

To understand how the training affected individuals, we turned to the evaluation surveys conducted by GADAus following the sessions. These surveys asked the participants to report their main takeaways, rate the value of the training, and rate their change in knowledge after participating in the training. This section details the main findings regarding these topics.

4.1.1 Value of Training to Individuals

Overall, comments about GADAus' training were very positive and demonstrate that their trainings are effective in educating people about the effect of gender and sexuality in disaster response. One participant commented, "a policy analysis that ensures real and active inclusion in our work and activities, promotes strategies, data into recovery objectives". The training was also applauded for their ability to effectively, but simply, educate and spread awareness, such that many participants left, "realizing that changing how we view and respond to gender stereotypes has such a huge impact on our ability to cope during and after a disaster".

Following each training, the participants were asked to rate their opinion of the value of the training on a one to five scale, one being least valuable and five being most valuable. As seen in Figure 4 below, in the online training only 2.8% of participants rated it a two or lower for value, while 88% gave it a four or higher.

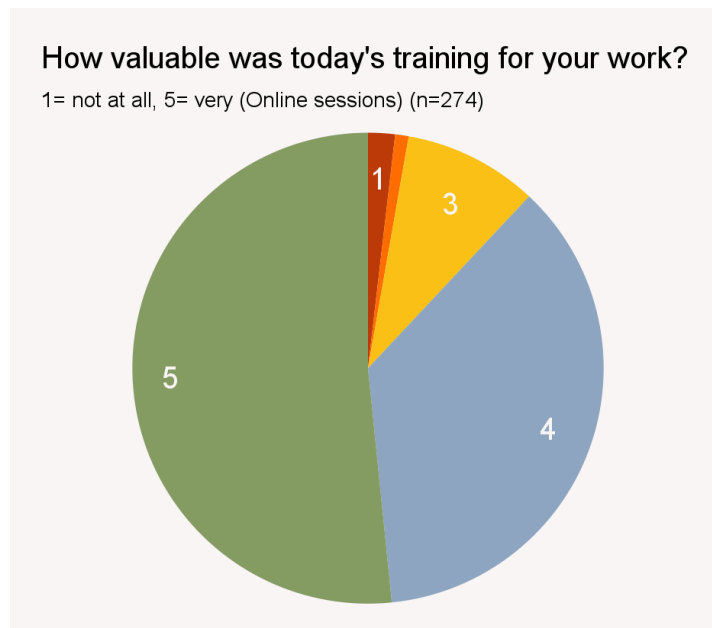


Figure 4. *How valuable was today's training for your work? (Online)* This pie chart shows the breakdown of online participants' rating of training value on a one to five scale.

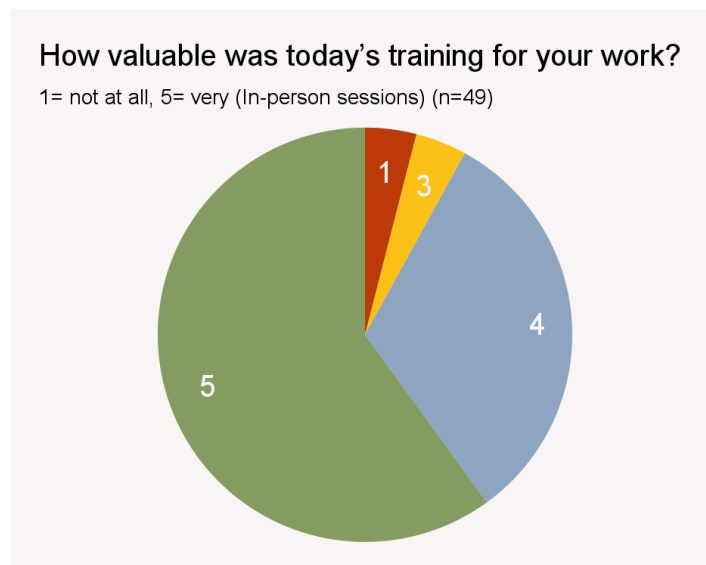


Figure 5. *How valuable was today's training for your work? (In-Person)* This pie chart shows the breakdown of in-person participants' rating of training value on a one to five scale.

As shown in Figure 5, in-person participants had similar opinions to participants in the participants in the online training, although the question was not asked on all of the in-person surveys so the dataset size is much smaller for this question (only 13 responses in-person, compared to the 217 responses for this question for online respondents).

In addition to inquiring about the overall value of the training, participants were asked if they would recommend the training to others and the answer was overwhelmingly yes, at 92%. Only 3.3% of participants said they would not, while 4.7% of respondents left the question blank. Additionally, many participants also discussed wanting to get people in their workplaces to take the training, saying things like they would “Encourage other volunteers to attend GAD training and consider gender in responding/planning”. Overall, we can conclude that the training is valuable to participants, based on both their ratings of the training and positive comments (discussed further in Section 4.2).

4.1.2 Participant Takeaways

According to our interview with trainer and Manager of Sector Engagement for GADAus Steve O'Malley, following the training they want participants to “*do their own analysis or cast a lens over their own organization's procedures and policies*”. Two key questions included in the participant evaluations provided insight on this self-analysis: what the participant would change in their personal life, and what they would change in their workplace based on the training. Common changes reported included:

- *Awareness*: participants gained awareness and would be more observant of the issues presented in the training as they continue through their daily life and in their workplace.
 - ◆ “*Family violence will now be in my mind as I move around the fire-affected communities.*”
- *Reflection*: participants would reflect on their own actions and the actions of others in relation to the training topics

- ◆ *“Deep thinking about prevention planning, ensuring people having the conversations are a true reflection of the community and that all the voices around the table are heard.”*
- *Action:* participants would take action to call out negative behavior according to the training as they saw it around them.
 - ◆ *“More dedicated resources to implementation of a gender equity plan, embed gender equity into programs and services.”*
- *Conversations:* participants would talk to their colleagues about what they learned in the training, and share the information.
 - ◆ *“I’ll speak to my team to make them aware of issues we’ve discussed in relation to our volunteering at relief centre.”*
 - ◆ *“Ensuring that we talk more openly about the LGBTI community to ensure inclusiveness.”*

These themes show that, at least immediately following the training, O’Malley’s goals for participants are being met. Liam Leonard, Manager of Training, Policy and Quality Assurance as well as a trainer, stated that his goals included “getting people to start to question a whole lot of assumptions they’ve made about gender that they hadn’t realized before”. The comments reflect that the training is accomplishing that, with participants saying they would “increase [their] awareness of workplace practices and assumptions and find ‘can do’ ways to address these”. The participants leave the training overall more knowledgeable and aware of the issues presented and ready to change their own lives as a result.

4.1.3 Numerical Data From Evaluations

The post-training surveys also assessed how well the participants felt their knowledge changed. Participants were asked to rate their knowledge, on a scale of one to five, before and after the training (a select few used a one to ten scale that was then adjusted).

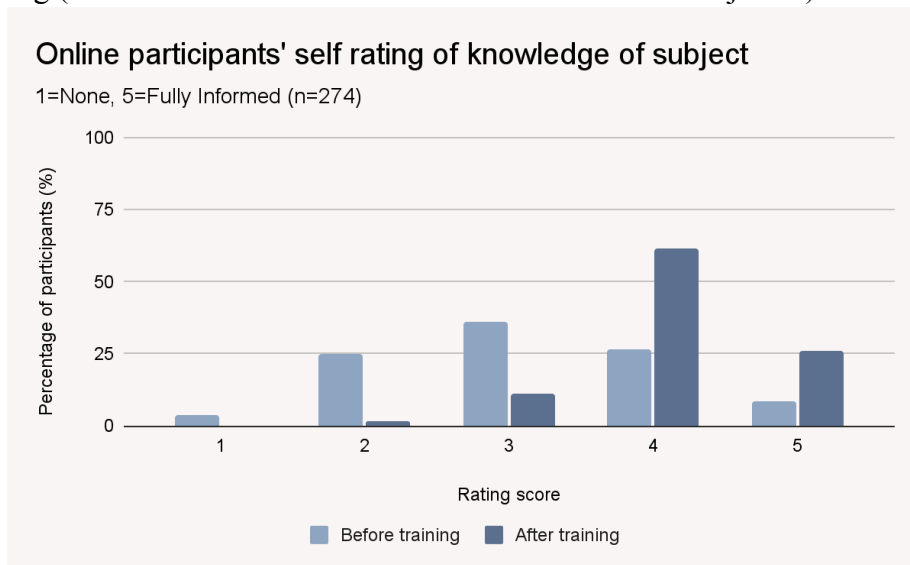


Figure 6. *Online Participants’ self rating of knowledge of the subject.* This chart shows a combination of all of the available online participant evaluations to show their self-ratings of training knowledge before and after training.

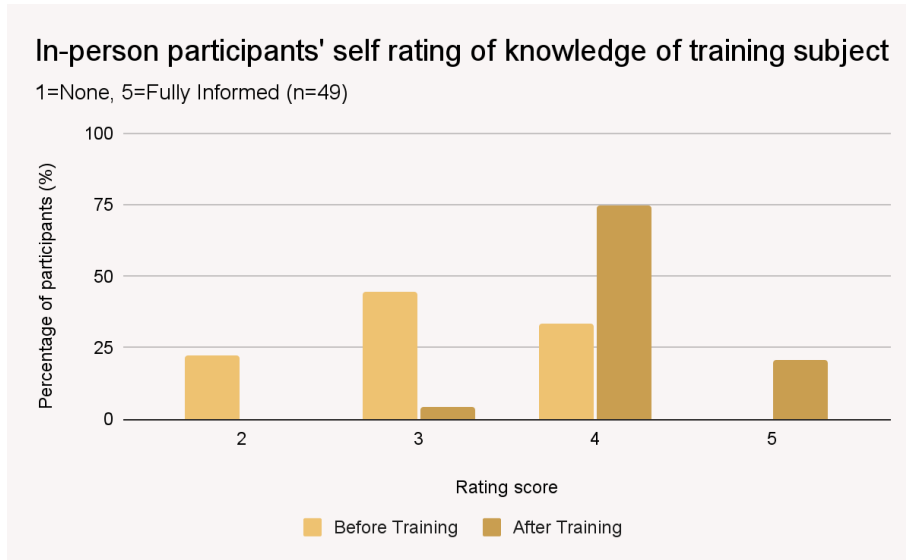


Figure 7. *In-Person Participants' self rating of knowledge of the subject.* This chart shows a combination of all of the available in-person participant evaluations to show their self-ratings of training knowledge before and after training.

Participants in online training, on average, rated their knowledge before the training as 3.00 and their knowledge after the training as 4.03, as shown in Figure 6. Over 75% of participants rated their knowledge after the training as a 4 or 5. The before numbers were far more spread out, with about a third below 3, a third at a 3 and a third above 3. The in-person data is similarly spread, with over 90% of participants rating their knowledge level as 4 or 5 after the training and before training being mainly 2's and 3's.

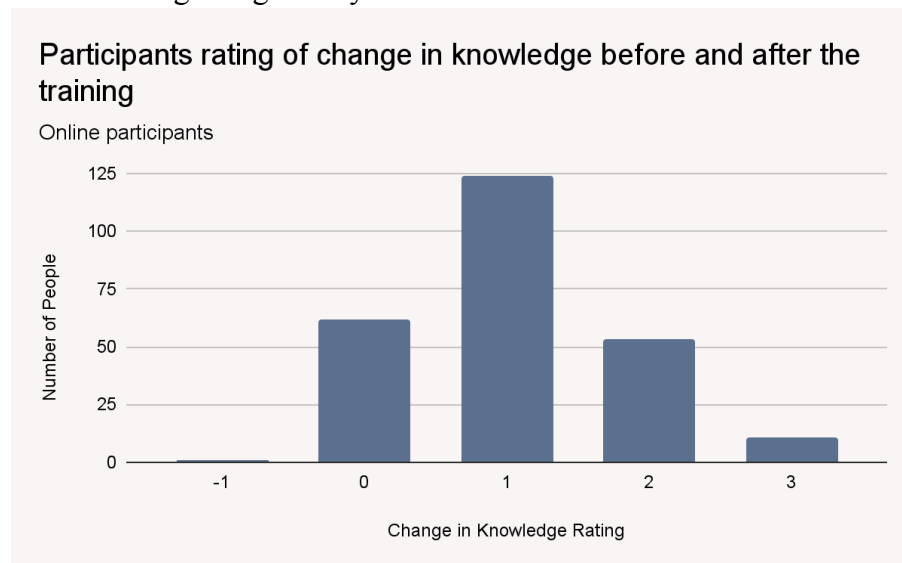


Figure 8. *Participants rating of change in knowledge before and after the training.* This bar graph shows the difference of online participants' rating of their knowledge before and after the training. Most reported a slight increase in knowledge before and after.

Figures 6 and 7 illustrate the knowledge increase, and Figure 8 visualizes the difference between before and after by taking the participant's before rating and subtracting it from their after. The average increase in self-reported knowledge was calculated to be 0.729 for in-person

evaluations and 1.04 for all the online evaluations. This data demonstrates that both the in-person and online training were successful and impactful.

The average knowledge increase and average value rating for each individual training session were compared to the overall average, and there were no significant outliers for overly successful or unsuccessful sessions. Similarly, we compared the average of each trainer pair to the overall average and also found no outliers. This allowed us to conclude that regardless of trainer or specific training session, the participants gained knowledge and thought the training was highly valuable.

4.2 Effectiveness of Training Sessions from Participants' Perspective

A key component in assessing the effectiveness of GADAus' in-person and online trainings is understanding its effectiveness from the participants' perspective. Analysis of past survey comments and interviews with past participants (conducted by our team) yielded common themes across both delivery modes for what participants most enjoyed about the training, what they would have liked to see improved, and what they most wanted after the training. These themes were then categorized, coded, and plotted to summarize our findings on the effectiveness of GADAus' training from participants' experiences.

4.2.1 Aspects of Trainings Most Enjoyed by Participants

Through our analysis of in-person and online survey comments and interviews with past participants, it was discovered that across both modes of delivery, participants most enjoyed:

- *Involvement*, or being able to participate in discussions, practical exercises, and activities.
- *Personal Experiences*, or being able to hear and see photos, videos, stories, and case studies about gender and disaster.
- *Data*, or the use of statistics and research in the training.

These comments were coded using this categorization to produce the following plots:

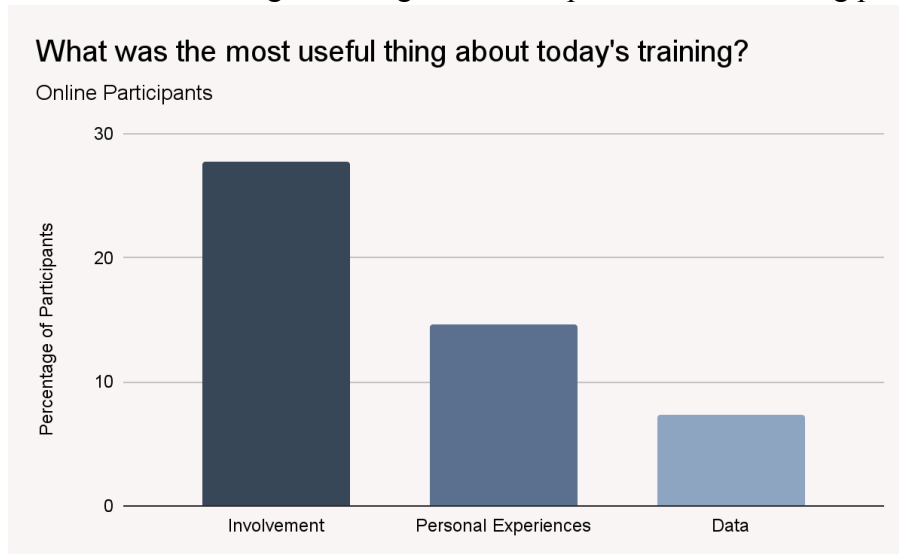


Figure 9. *What was the most useful thing about today's training? (Online)* This bar graph illustrates the percentage of online participants who identified involvement, personal experiences, and/or data as useful parts of GADAus's training. Compiled from GADAus survey data.

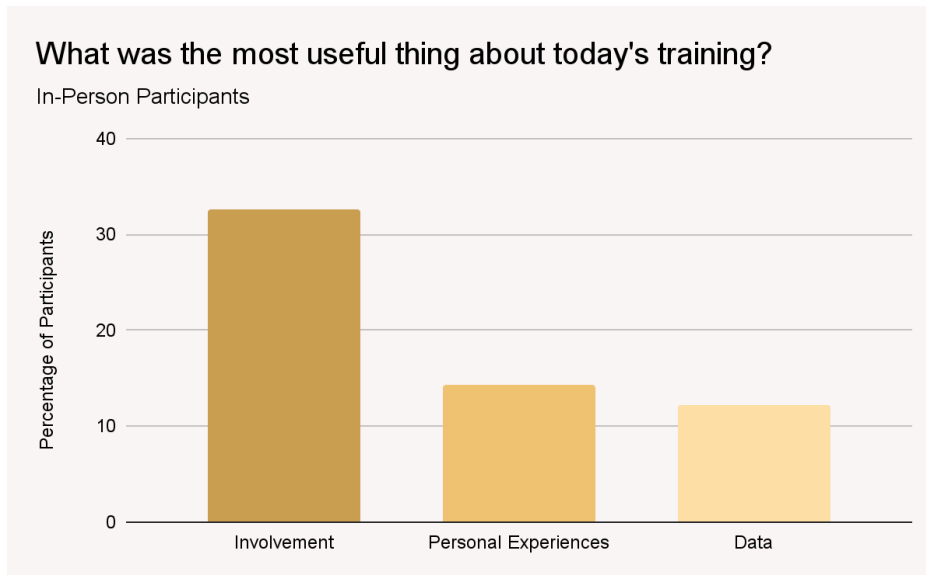


Figure 10. *What was the most useful thing about today's training? (In-Person)* This bar graph illustrates the percentage of in-person participants who identified involvement, personal experiences, and/or data as useful parts of GADAus's training. Compiled from GADAus survey data.

As shown in Figures 9 and 10, approximately 30% of in-person and online participants thought discussions, practical exercises, and activities were the most useful part of the training. Participants enjoyed “having some time for discussion with others about planning, training, [and] engaging” their communities about gender and sexuality stereotypes and the role of gender and sexuality in disaster response. Many participants were unaware about the effect of these stereotypes, so they found great value in being equipped with tools to “increase [their] awareness of workplace practices and assumptions” that are not gender and sex equitable, and finding “‘can do’ ways to address these” practices and assumptions to make their workplace more aware and inclusive.

Participants also found great value in hearing personal stories about gender and disaster, as well as having statistics to understand the themes of the training. These were the next largest themes of comments, with approximately 15% and 10% of participants citing these aspects as useful, respectively. Many participants expressed that “photos were a power tool that captured the raw emotion” of people’s experiences in disasters. Additionally, many remarked that “hearing stories and examples from people who had experienced family violence in a post-disaster context” was a powerful and effective way to illustrate the importance of GADAus’ work and the role gender and sexuality play in disaster response.

4.2.2 Participant Suggestions for Improvement

Conversely, analysis of interviews and in-person and online survey comments showed that participants would have liked:

- *More Involvement*, or the opportunity to participate in more discussions, practical exercises, and activities.
- *More Information*, or being presented with more data and research to be more aware about the role of gender and sex in disaster. Additionally, being equipped with more specific strategies and tools to make a positive difference in disaster response.

- *Less Information*, or being presented with less data, research, and strategies to avoid training from becoming too dense.
- *Nothing*, as in participants had no comments about how to improve the training.

Some comments were excluded because they were miscellaneous and did not contribute anything meaningful to this analysis. These comments were coded using the above categorization to produce the following plot:

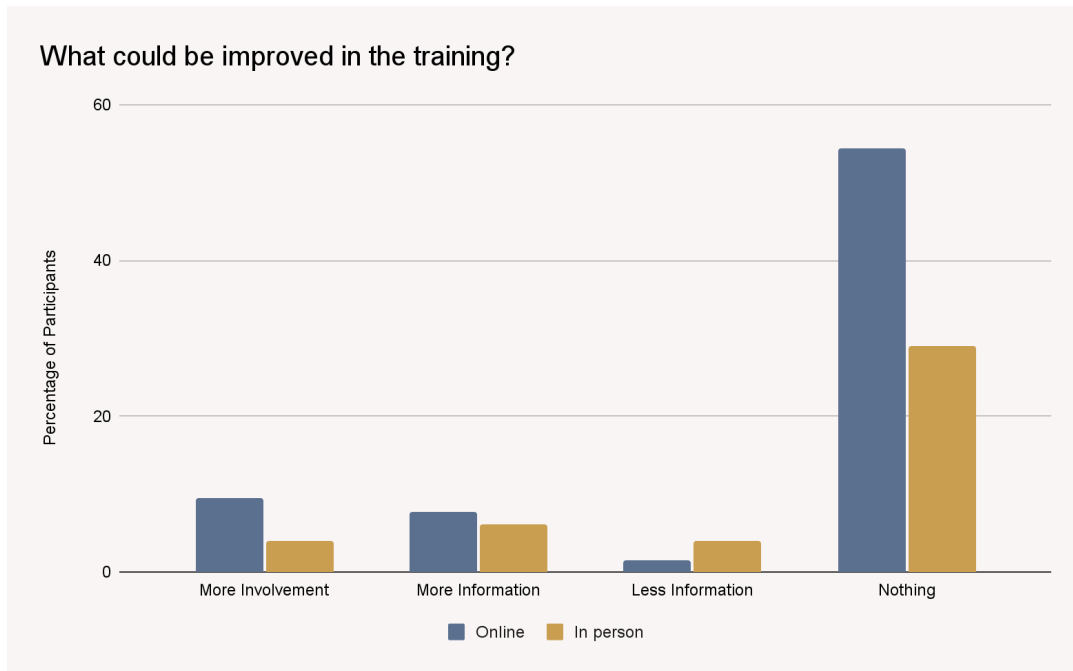


Figure 11. *What could be improved?* This bar graph illustrates the percentage of participants who identified more involvement, more information, less information, and/or nothing as parts of GADAus’s training to be improved. Compiled from GADAus survey data.

Figure 11 shows that approximately 10% of online participants wanted more involvement from the trainings, and just under 10% of participants wanted more data, research, and specific strategies to make a positive difference in disaster response. Participants left the training wanting more “practical advice” and wishing that it had been “more interactive” due to the nature of the online environment. Participants were not displeased with the online training; however, many thought the training was “fascinating, but [they] needed more” in order to feel empowered to make a difference in their workplaces and lives.

Participants in the in-person training reported a greater range of comments. A greater number of participants wanted more data, research, and specific strategies as opposed to more involvement, which is the opposite of the online training. These results yield significant insights into the strengths of the delivery modes: in-person trainings lend themselves easier to involvement as “the trainers can see if someone’s not coping...and can go in later to see if they’re okay and check in with them”, and people can “communicate [by] watching people’s body language”. The online environment forgoes this aspect, but allows the trainers to “hone [the material] and become sharper on why you’re doing it”, allowing them to better deliver the information and meaning of the training.

Participants from both trainings recommended including less data, research, and strategies. In the online setting however, these comments were negligible compared to the amount of participants who wanted more information. Conversely, the number of in-person participants who wanted less information is comparable to those who want more. While participants greatly enjoyed the training’s involvement, some felt overwhelmed by the amount of interaction *and* information presented to them. Regardless, the majority of participants in both environments had nothing to improve and/or thought that nothing should be improved about the training.

4.2.3 Participant Desires for Future Trainings

Finally, further analysis of participant comments revealed that, out of those who indicated they wanted more after the training:

- 21% wanted *more GADAus training*, either by taking more GADAus training or seeking information on how to become a trainer.
- 23% wanted *more actions of what to do*, or being equipped with specific strategies and tools to make a positive difference in disaster response.
- 37% wanted *more general information*, such as further data and research to increase their knowledge and awareness about the role of gender and sex in disaster response.
- 19% wanted *other* things not related to the above categories.

Participant opinions from in-person sessions were not calculated due to insufficient data. The results from the online trainings are demonstrated in Figure 12:

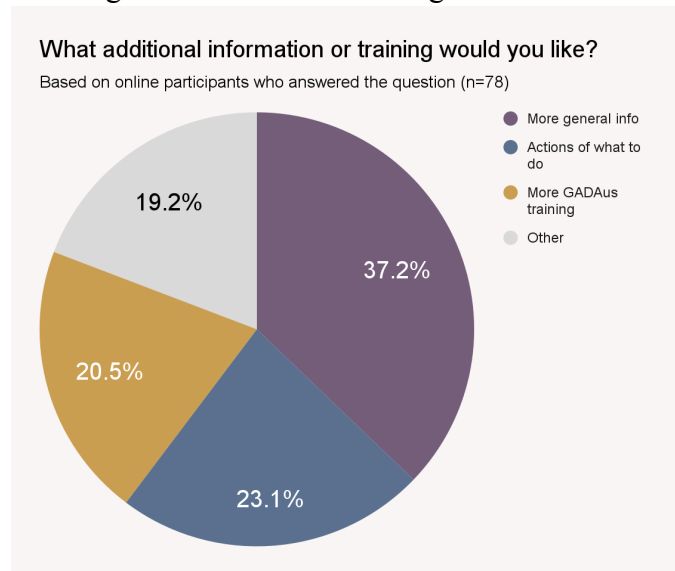


Figure 12. *What additional information or training would you like?* This pie chart illustrates the percentage of online participants who indicated the desire for more GADAus training, more general information, and more concrete actions on how to be more gender and sex equitable after taking GADAus’ training. Compiled from GADAus survey data, only includes those who answered this question.

Participants want to be equipped with the tools and ability to make a positive difference about the role of gender, sexuality, and gender equity in disaster response and everyday life. Participants leave the training wanting more information, training, and steps to implement what they learned in their daily lives. These tools need to be specific though—participants sometimes felt overwhelmed and paralyzed by the amount of information presented at the training sessions.

Equipping participants with specific examples and activities catered to their workplace can make them leave the trainings feeling empowered to positively change their culture to be more gender and sex equitable. Finally, comments revealed that a combination of qualitative and quantitative data is the most effective. People were able to understand what the quantitative data illustrated, but they were able to sympathize with and relate to the qualitative personal stories and experiences of disaster survivors and their experience with gender and sex in disaster, which cemented the message and importance of GADAus' trainings in their minds.

4.3 Effectiveness of Delivery Modes from GADAus Staff Perspective

The effectiveness of online training in achieving GADAus' goals was determined through a series of five interviews with GADAus staff. The following section details the benefits and drawbacks of virtual delivery in comparison to in-person delivery. The benefits include accessibility, set-up, and new content opportunities on the Zoom platform. On the other hand, drawbacks mainly relate to the nuances of online communication.

4.3.1 Challenges with Virtual Delivery

In discussing the delivery of sessions with the trainers, patterns emerged amongst all interviewees. The main drawbacks revolved around communication, specifically the lack of body language, inability to check in on participants, and difficulty including all participants in conversation.

The online setting alters the way in which people communicate. Everyone is involved in one conversation, whether actively or passively, and confined by the same Zoom square as other participants. Due to the presentation of faces on Zoom calls, it can raise challenges of recognizing body language of participants during the session. Multiple trainers compared this aspect to the in-person setting:

- *“Nothing like the tactile way we can communicate by watching people’s body language in-person.”*
- *“In real life the trainers can see if someone’s not coping... and can go in later to see if they’re okay and check in with them.”*

Comments such as these are indicative of all of the trainers' experience. One presenter reflected on a tactic they used to get to know or understand how specific participants were feeling was through “informal interactions with each participant during lunch or tea breaks”. Similarly, the conversation throughout the session tends to be more general rather than guided by the interests of the participants in the session. The following comments highlight some shortcomings of the type of conversations facilitated during sessions through the trainers point of view:

- *“Really scripted, you’re working towards a deadline rather than promoting that conversation.”*
- *“Pretty set, rather than getting that real rich feeling of the room and where they want to go with the conversation.”*

An issue that was similar for both in-person and online delivery is the involvement of all participants in the session. In the majority of GADAus staff interviews, the interviewee described the typical types of participants as: those who were engaged and participated, and those who were engaged but tended not to vocally participate. Similarly, within the online setting, most

found that there would be a group of really talkative, willing to unmute participants and another group that were super engaged but not adding to the conversation. While both delivery modes had both types of participants, many trainers noted that it tends to make people more uncomfortable to be called out by name to add to the conversation in the online setting. Overall, the main weakness of the online setting is the change in communication styles. The lack of body language, robust conversation, and ways in which trainers involved participants emerged as negative feedback from the perspective of the trainers.

4.3.2 Strengths of Online Delivery

In addition to the weaknesses pointed out by trainers, multiple valuable strengths emerged across the interviews. The main benefits mentioned focused on accessibility, organization, and creativity related to the switch to online training.

Online delivery was noted as more accessible for both the trainer as well as participants. Prior to the pandemic, on site training sessions required much more logistical planning for GADAus staff. The process began with inquiry from an organization or group interested in participating in the program. Then, details regarding travel, accommodation, and other aspects had to be ironed out before the program took place. Compared to this process, the coordination of online training sessions would only take a few weeks from inquiry to training. One trainer noted that there was “no travel involved and no nervous curtain calls”. While this made training more convenient for him, he also stressed that the online platform made training much more accessible for participants. This was mentioned by multiple interviewees:

- *“Because it was all online, people could take advantage of that and attend... no matter what state they were from.”*
- *“Captured people who ordinarily couldn’t leave their work but could sit at their desk and factor [our training] into their day.”*

Online training was conducted using the Zoom platform, which is generally user friendly and only requires wifi access to function. Not only did this increase outreach across state lines, but it allowed for people who were not able to devote an entire day to GADAus training to participate.

This set-up of the online training modules also aided in the accessibility for those who could not devote an entire day to the training program. As mentioned in the background section, GADAus restructured their single day training program into five 90 minute sessions. The shorter sessions have been delivered in multiple different ways: multiple sessions in a day, daily, and weekly sessions. One of the trainers interviewed eloquently described the sessions as building blocks which “allows people to think about [the content] a little more between sessions” and really “builds that story to a crescendo”. Another trainer noted that the set up has “given a real opportunity for people to start to sit with it and feel it and build and build rather than one long session”. This setup provides participants with more reflection time on the content that they are learning, rather than being presented for a long stretch of time with limited breaks between sessions.

In addition to a reworked set-up of the training modules, the Zoom environment provided opportunities to enhance activities to fit the new environment. Prior to the interview process, GADAus had already mentioned the integration of targeted video content was a strength to their online training. Interviews with trainers confirmed similar ideas regarding creativity with the newer platform. One trainer shared his opinion:

“A lot of people make the assumption that online is the lesser mode of training... I don't agree with that after doing Zoom. If you're more creative, you can use some of the things on Zoom to enhance the training.”

Other trainers mentioned their experiences with some activities in the training that were not translated well to online initially. However, the reworking of these aspects allowed the staff to think about why the activity was important, what was the key takeaway, and how they could present that message in a way more suitable to online. One trainer describes this process: “You can hone it and become sharper on why you're doing it and strip away some of the background.” The updated interactive activities of the training were also the most appreciated by participants, as found through the feedback in previous sections. Many participants noted that Zoom activities were very well managed, specifically mentioning the Wedding Cake Model and discussion, as well as the X's and O's activity that highlighted the discrimination that LGBTQIA+ experience on a daily basis.

5. Recommendations

Our main conclusion based on everything we analyzed and all the feedback we were able to read is that GADAus' *Lessons in Disaster Training* is highly effective, both online and in-person, with strengths and weaknesses of both. Based on these strengths and weaknesses identified through participant feedback and staff interviews, we came up with recommendations for elements to keep and expand on as well as some changes and additions to both forms of delivery.

We recommend keeping the following training components and expanding on them:

- Activities to further understand themes of the training
- Discussions in breakout rooms
- Real life stories and examples

We also recommend the following changes to the existing training format:

- Have trainers join breakout rooms
- Provide less information in-person
- Follow up with implementation strategies and opportunities for more training and education

Finally, we recommend exploring a hybrid training format, as both in-person and online training were effective.

5.1 Successful Aspects of Training to Continue

One of the goals of this project was to determine if online training was effective and as mentioned above we are confident in saying it was. On a broader scale, we found all training to be very successful and beneficial to the participants. Based on staff and participant feedback, in-person training is definitely the preferred method, but moving forward both methods can and should be used to reach the broadest audience possible.

While there are issues with the online training, many can be worked out with more time with the software tools and slight adjustments to the training. Because of this, we recommend continuation of online training sessions. Based on survey data from over 250 online participants, and about 50 in-person, we determined that the online training was as effective as in-person training. Overall, the responses to what participants like or what they thought could be improved had the same themes, with similar frequency. Additionally, a higher percentage of online participants said they would change nothing about the trainings, compared to in-person.

Because we concluded they were comparable in effectiveness, the other benefits of online training - primarily accessibility to potential participants - means that we fully support continuation of online methods for conducting this training when appropriate such as when travel is not possible. The online format allows participants to join in from all across the country, and the way they are broken down into modules online makes it easier for participants to find the time to complete the training.

Group activities that involve participants, such as the X's and O's activity, allowed the participants to engage further with the material and many remarked it was their favorite aspect of the training. These and other of the training directly involve participants and give them something specific to do to apply what they are learning and understand it further. Because of this we recommend that more activities be incorporated into the online and in-person training sessions.

Small group discussions that happened in breakout when online are also something that we recommend should be continued and further in online sessions as well as incorporated into the in-person sessions. Discussions allow participants to talk about and to digest the information in between chunks of material.

Real examples and stories about victim's experiences following disasters were the other commonly identified most valuable piece of the training. They lend a realism to the training to allow participants to connect to the themes presented, that is missing with just statistics and information about the topic. As past participant Julie put it, it is "always good to hear from someone rather than have someone read about someone else". As such, we recommend continuing to include them and potentially incorporate more in all versions of the training.

5.2 Additions and Changes to Training

A common theme among online evaluation respondents was a lack of interactivity with both other participants and the trainers. Some comments included complaints that the training felt more like lectures than the heavily interactive form they were designed to be. Across both training types, interactive exercises were most commonly identified as the most useful part of the training. More interactive components can also help alleviate the concerns of trainers about the difficulties of gauging participant reactions to the training content, as it will allow the participants and trainers to interact with each other.

An interactive component often noted by participants was the small group discussions, which happened in breakout rooms for the online form of the training. Adjusting the structure of the training to allow for more time for discussion, especially online where it can be harder to fall into the flow of a conversation with the delay added by video conferencing, would improve quality of the training. Additionally, increasing time in small group discussions will allow time for trainers to float around the rooms and check on groups. This will both increase interaction between trainers and participants, and allow the trainers to better gauge participant engagement and response to the content being given. Similarly to increase online participation we recommend incorporating zoom's reaction features which based on experience during our classes can be beneficial in getting participants to be more likely to engage than if they had to just unmute themselves out of the blue.

One discrepancy we noticed between the online and in-person survey responses is visible in Figure 11, which showed that a higher percentage of in-person respondents wanted less information, while a higher percentage of online participants wanted more. We think that the reason for this difference was in part because the way the information is provided online means that participants could absorb the information more easily. Because of these survey responses, we would recommend slightly scaling back the amount of information provided during in-person sessions, and instead providing resources before and after that can be absorbed independently.

As shown in Figure 12, after the trainings have concluded, many participants want to continue in some way, primarily through more general information, although many participants also identified wanting either more GADAus training or more instruction on what to do with the information they received. Because of this we would recommend creating a structure to provide resources to participants after the training, which could update them on new research, informing them of other training they could participate in with GADAus, and access to the resources used in the sessions. Additionally, based on participants wanting more instruction of exactly what to do next we recommend offering a basic example framework of steps to take in their lives, armed with this new information.

5.3 Other Options to Consider

Another option to deliver these training modules is a hybrid format which we were able to begin discussing with GADAus staff informally. One method used by colleges is to have material and information given to the students or participants beforehand with a majority of the data and then to use the time in-person to discuss further, elaborate on confusing aspects, as well as have activities and more person to person interaction. Introduced to us by a member of GADAus staff is a hybrid format where some trainers are able to go out and be with the participants while other trainer(s) do not travel and interact remotely. We agree with this concept and think it will highlight the benefits of in-person as a majority of the people will have that face to face interaction while minimizing the costs associated with time and money needed for everyone to travel and stay in another state.

Additionally, we have a few recommendations for questions to add to the pre/post training evaluations for participants to fill out. The addition of a gender question could aid in determining the gender distribution of participants. The addition of a position question would help determine the workplace “level” for participants. Adding these questions to the evaluation form would help break down the demographics of GADAus’s outreach.

6. Conclusions

We were able to do an in-depth analysis of the extensive evaluation data to determine participant opinions. There is an overwhelmingly positive response to *Lessons in Disaster*, in which a vast majority of participants found it valuable and would recommend the program to others. Our group also identified the pros and cons of the online format through the eyes of the participants. Discussions and activities were repeatedly pointed to as the most valuable part of the training, and many suggestions for improvement pointed to having more time for discussion and activities. The staff's perspective of online delivery was also analyzed. While the transition from an in-person to online training format presented challenges, the staff was able to tailor the existing training modules to fit the Zoom platform. Staff noted improved creativity, accessibility, and content. The online delivery is just as effective as in-person, and allows GADAus to more easily reach participants and emergency responders across Australia. Going forward we believe both methods should be used to spread GADAus' work as broadly as possible.

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Appendix A: Past participant survey questions

GADAus' survey questions

Face to face questions

- GE and EM
 - Before attending today I would have rated my knowledge about gender equality as: none 1-5 fully informed
 - After attending today's training I'd rate my knowledge as: not at all 1 - 5 excellent
 - How valuable was today's training for your work? Not at all 1 - 5 very valuable
 - What changes in your organization might you introduce after this training?
 - What was the most useful thing about today's training?
 - What could be improved?
 - What additional information or training would you like?
 - Other comments?
- Men and Disaster Workshop
 - Just checking in with you! What field do you work in?
 - Your opinions! Please circle a number on the scales below indicating your response to each statement at the start of the workshop
 - I am aware and knowledgeable about masculinity and its implications for disaster
 - Disagree strongly 0 - 10 Agree strongly
 - It is important to consider gender issues in disaster planning, response, and recovery
 - Please comment on either of the above (or both)
 - What is one thing you hope to get from this workshop?
 - Can you tell us why you decided to come?
 - Session 1: Sex, gender, and disaster response Please indicate your overall satisfaction with this session and comment in the space below to say why you gave this score.
 - 0-10 Highly unsatisfactory - highly satisfactory
 - Session 2: Learnings from Black Saturday please indicate your overall satisfaction with this session with this session
 - Session 3: Exploring the harms Please indicate your overall satisfaction with this session and comment in the space below to say why you gave this score.
 - Session 4: Reducing the harms pre-disaster Please indicate your overall satisfaction with this session and comment in the space below to say why you gave this score.
 - Session 5: Reducing the harms post-disaster Please indicate your overall satisfaction with this session and comment in the space below to say why you gave this score.
 - Please comment on any of the above statements or your response to them
 - My expectations of this training have been met
 - 1-10
 - What did you find most valuable in this workshop?
 - Please comment on the facilitators, the activities, the networking opportunities, etc
 - Please comment on aspects of the workshop - venue, food, etc

- What could be improved? Any other comments?
- Under Pressure LGBTI-inclusive emergency services
 - Before attending today I would have rated my *knowledge* of LGBTI - inclusive practice as:
 - 1-5, No knowledge - very well informed
 - Before attending today I would have rated my *understanding* of LGBTI - inclusive practice as:
 - To what extent have the aims of the training been met
 - 1-5 extremely well- not at all
 - How well was the training delivered?
 - After attending today's training id rate my knowledge as:
 - After attending today's training id rate my understanding as:
 - How relevant is the training to emergency sector personnel?
 - How valuable was today's training for your work?
 - What part of the training did you find most useful?
 - What part of the training was least useful?
 - Do you have any other comments or suggestions?

Online questions

- Bushfire Recovery Victoria
 - Before attending today, I would have rated my knowledge about family violence at times of emergency and disaster as: 1=None - 5=Fully Informed
 - After attending today's training. I'd rate my knowledge as: 1=None - 5=Fully Informed
 - Please comment on your responses for Q1 & 2.
 - What was the most useful thing about today's training?
 - Learning about family violence at times of emergency and disaster is very useful to my job position.
 - Likert scale
 - Learning about family violence at times of emergency and disaster is important for my organization.
 - How do you intend to make changes to your behavior in your personal life following this training?
 - What immediate workplace changes do you intend to make following this training?
 - What long-term workplace changes do you intend to make following this training?
 - What could be improved in this training?
 - What additional information or training would you like?
 - Other comments
 - Would you recommend this training to others?
- The impact of gendered expectations on disaster experience for women and men
 - Before attending today, I would have rated my knowledge about the impact of gendered expectations on disaster experiences for women and men as: 1=None - 5=Fully Informed
 - How valuable was today's training for your work
 - What changes might you make in your behaviors following this training

- What workplace changes might you introduce following this training
- What was the most useful thing about today's training
- What could be improved
- What additional information or training would you like
- Trainer name
- Date
- Other comments
- Would you recommend this training to others
- City of Casey - Setting up Relief Centres: Applying a Gender Lens - An action learning workshop
 - Before attending today, I would have rated my knowledge about gender and emergencies as:
 - After attending today's training. I'd rate my knowledge as:
 - Please rate the following sessions from 1 – 5 (1 poor – 5 Excellent) with a comment for each:
 - What was the most useful thing about today's training?
 - What could be improved in this training?
 - How are you going to apply the learnings from today's session to your role?
 - Are there any other topics you would like to have further training/workshops on?
 - Do you have any further comments?
- Under Pressure: The impact of disasters and emergencies on LGBTI people
 - Before attending today, I would have rated my knowledge about the impact of disasters and emergencies on LGBTI people as: 1=None - 5=Fully Informed
 - After attending today's training. I'd rate my knowledge as: 1=None - 5=Fully Informed
 - How valuable was today's training for your work? 1=Not at all - 5= Very
 - What changes might you make in your behaviors following this training?
 - What workplace changes might you introduce following this training?
 - What was the most useful thing about today's training?
 - What could be improved?
 - What additional information or training would you like?
 - Organization
 - Position
 - Trainer
 - Venue
 - Would you recommend it to others
- Why is gender important in an emergency management workshop
 - Before attending today, I would have rated my knowledge about gender and emergencies as 1=None - 5=Fully Informed
 - After attending today's training. I'd rate my knowledge as: 1=None - 5=Fully Informed
 - What was the most useful thing about today's training?
 - What could be improved in this training?
 - How are you going to apply the learnings from today's session to your role?
 - Other comments
 - I would recommend attending this workshop to others

- The impact of gendered expectations on disaster experience for women and men
 - Before attending today, I would have rated my knowledge about the impact of gendered expectations on disaster experience for women and men as: 1=None - 5=Fully Informed
 - *same questions as under pressure

Appendix B: Past participant interview questions

- What is your name and organization? (for record-keeping purposes)
 - What is your position?
- Was your training session completed in-person or online?
 - How long ago did you have your training?
 - What training did you take?
- Why did you take this training?
 - What was your goal in doing the training? How far did the training help you achieve this?
- What is your experience with disasters?
 - Before training
 - After training
 - Disasters are defined as “*A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability, and capacity, leading to one or more of the following: human, material, economic and environmental losses, and impacts*”.
 - On reflection, did gender influence this experience?
- How would you describe your knowledge of the role of gender in disaster planning and responses before the training?
 - How would you describe your knowledge of the role of gender in disaster planning and responses *after* the training?
- How engaging was the training?
 - What would have made you more engaged during the program?
- What was done well in the training?
- What would you have liked to be done differently regarding the training?
- Would you say the training was effective in completing its mission/goal?
 - Was the training effective in achieving *your* goal?
- Did you make any personal or work-related changes based on the training?

Appendix C: GADAus staff and associates interview questions

- What is your name (for record-keeping purposes)
- What prompted your interest in gender and disaster?
- What is your history with the organization?
- Have you done any other work in this field?
- What does the training you receive to become a trainer look like?
- What are the specific goals of the training you deliver?
- Why are there different training topics between in-person and online?
 - I.e., what prompted GADAus to explore different topics online, rather than simply adapt the existing training modules for online?
- What do you see as the biggest challenge with educating organizations and individuals about the gendered impacts of disasters?
- What do you think is the biggest strength of the training program?
- What do you think is the biggest challenge of the training program?
- What has been the biggest advantage of online training
 - Biggest disadvantage?
- What has been the biggest advantage of in-person training
 - Biggest disadvantage?
- What is your biggest goal with GADAus moving forward?

Appendix D: People Interviewed

From GADAus:

- Jaspreet Kaur, *National Project and Finance Manager*, interviewed on March 22, 2022
- Liam Leonard, *Manager of Training, Policy and Quality Assurance*, interviewed on March 23, 2022
- Steve O'Malley, *Manager of Sector Engagement*, interviewed on March 24, 2022
- Rachael McKay, *Manager of Train the Trainer*, interviewed on April 1, 2022
- Debra Parkinson, *Executive Director of Gender and Disaster Australia*, interviewed on April 7, 2022

Past Participants:

- Courtney Cronin, *Australian Red Cross*, interviewed on April 11, 2022
- Ian, *Country Fire Authority Volunteer and State Emergency Services Volunteer*, interviewed on April 14, 2022
- Julie B, *Australian Red Cross, Location and Project Event Coordinator*, interviewed on April 22, 2022