



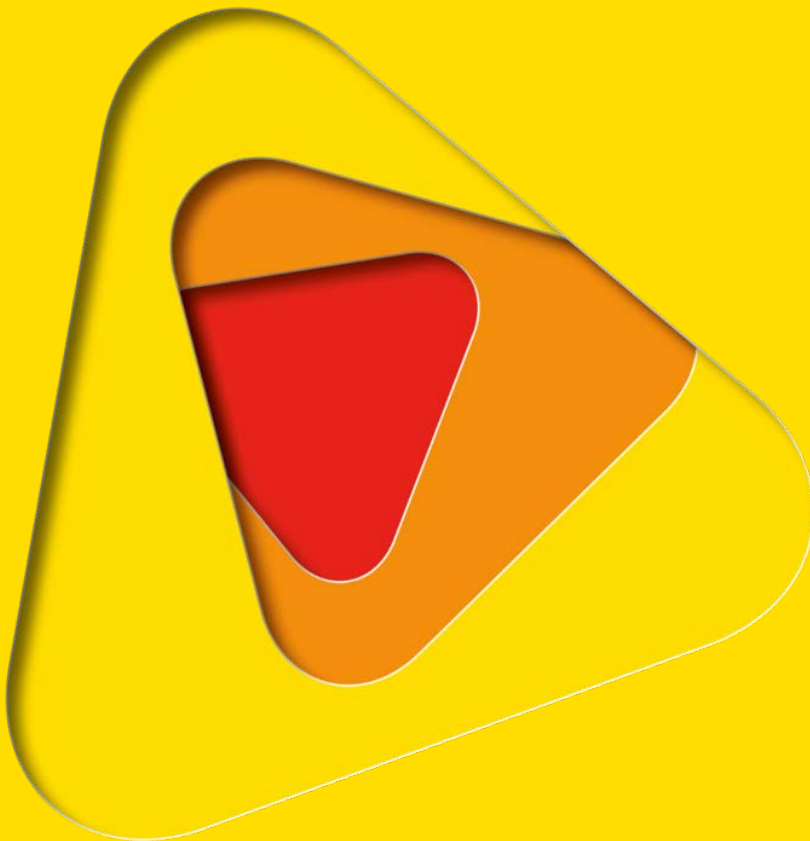
# **“I THINK I’M GOING TO BE FRIGHTENED OUT OF MY WITS” PSYCHOLOGICAL PREPAREDNESS AND VULNERABILITY: INSIGHTS FROM THE SAMPSON FLAT FIRE**

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## INTRODUCTION

Bushfires and other natural disasters are becoming increasingly frequent and more severe. Australian bushfire projections suggest that by 2020 the number of days classified as 'very extreme' bushfire risk will double and by 2050 there may be as high as a four- to five-fold increase in frequency compared to data from 1990 (Lucas, Hennessy, Mills & Bathols, 2007).

Research into preparedness, therefore, is increasingly important. Preparedness commonly refers to actions taken to protect oneself, one's family and property. For bushfires, this typically involves material preparedness, such as creating a cleared area and the house and having battery-operated communication devices. This kind of physical preparation also involves developing a bushfire plan (e.g. to stay or leave early; how to look after pets in a fire) and acquiring greater knowledge and understanding about bushfires and bushfire risk. However, a growing body of research identifies psychological preparedness as an important factor in natural disaster preparedness.

Psychological preparedness is defined as a 'state of awareness, anticipation, and readiness - an internal, primed, capacity to anticipate and manage one's psychological response in an emergency situation' (Malkina-Pych, 2013). That is, psychological preparedness is not necessarily about removing feelings of anxiety or stress, as these may be adaptive, but in learning to anticipate, recognise and manage these effectively. Initial research drawing on the much larger body of research on the psychological correlates of physical preparedness also suggests that emotional preparedness may include cognitive states such as feeling confident about being able to cope with a disaster and a sense of personal control and self-reliance (Morrissey & Reser, 2003; Rhodes 2003)<sup>1</sup>.

Although there is a substantial body of research on post-disaster psychology (e.g. Yun, Lurie & Hyde, 2010; Paton & Long 2010), there is as yet little on pre-disaster psychology. However, emerging research indicates that a lack of psychological preparedness is a significant vulnerability factor prior to, and during a disaster. An inability to anticipate and manage strong emotions can lead to cognitive disruption resulting disorientation, poor attention and memory recall; and poor decision-making and judgment (Malkina-Pykh, 2013). A lack of psychological preparedness has also been linked with lower physical preparedness (Morrissey & Reser 2003). Conversely, being psychologically prepared can increase confidence, as well as planning and preparation, assisting people to act more coolly and calmly (Reser & Morrissey, 2009). It is thought that being able to anticipate and manage psychological responses such as anxiety enhances people's coping ability and promotes better preparedness. In an evaluation of a psychological preparedness intervention utilising Stress Inoculation Theory, Morrissey & Reser (2003) found that it significantly increased feelings of efficacy and control, as well as people's ability to anticipate and identify emotions, as well as a moderately higher level of physical preparedness. It is also thought that pre-disaster psychological preparedness may act as a preventative against post-disaster trauma (Morrissey & Reser, 2003).

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<sup>1</sup> Throughout the literature, the terms psychological, emotional and mental preparedness are used interchangeably. We have primarily used the term 'psychological' in this paper, as it encompasses both emotions as well as the cognitive states which may assist in managing these emotions. Our initial research used the terms 'emotionally prepared', as this was a more popularly understood term, as well as references to managing emotions and feeling in control, and we use these terms when reporting the results.



Despite its potential to improve bushfire readiness and support people in carrying out their plans, we know much less about psychological, as opposed to physical, preparedness. In particular, we know little about psychological preparedness for bushfires, which are unique in terms of preparedness in relation to the decision to stay or go. Further, there is as yet little research on psychological preparedness with people who have recently experienced a natural disaster as previous research has been theoretical rather than actual (although Morrissey & Reser 2003 is an exception to this).

Using the findings of a joint research project with the South Australian Country Fire Service (CFS), the Bushfire and Natural Hazards CRC, and the community affected by the Sampson Flat Fire in 2015, we explore psychological preparedness in a bushfire context – what it is, what it is related to, its consequences, and potential interventions.

## Research questions

This research paper asks:

1. What factors are related to increased emotional preparedness?
2. What are the emotions people experienced, and what are their triggers?
3. What are the consequences of strong emotions before, during and after a fire?
4. What do these findings tell us about potential interventions to increase emotional preparedness?

## METHOD

### Data collection

Quantitative data was collected through an online survey and a telephone survey, while qualitative data was collected either via face-to-face or telephone interviews.

Participants for the online survey were recruited by the CFS through their website and Facebook page and printed posters and fliers. The online survey was open from 30 June 2015 until 30 July 2015. Overall, 207 people responded. Of these, 10 people began the survey but did not provide answers to any questions. These participants were removed from the analysis. Four participants were under the age of 18, and, for ethical reasons, these participants were also removed from the analysis. This left 193 responses<sup>2</sup>.

Participants for the interviews were recruited by the CFS through the post-incident Building Impact Assessment Survey, which had identified people who were willing to participate in further research, and through printed flyers, their website and Facebook page. Further, participants were also recruited through the online survey which included contact details for the Chief Investigator. The interviews, which were a semi-structured conversation about people's experience in the Sampson Flat fire, were conducted between 13 July 2015 and 31 August 2015. These were either face-to-face in people's homes or conducted over the telephone, and ranged from one to two hours. A total of 15 people were interviewed.

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<sup>2</sup> Not all respondents answered all the questions. Where not all respondents were included in the analysis, this is indicated in a footnote.



## Data analysis

The quantitative data from the online survey was analysed using chi-squares ( $\chi^2$ ). The false discovery rate was controlled using the Benjamani and Hotchberg (1995) procedure. The qualitative interview data was analysed thematically, and as case studies and narratives which provided rich detail and depth to the findings of the quantitative analysis. It was used to illustrate the types of emotions people experienced, as well as their triggers and consequences.

## RESULTS AND DISCUSSION

Whilst 75 per cent of those affected by the fire perceived themselves to be physically prepared, only 56 per cent felt emotionally prepared.

Emotional preparedness was gendered. Males were more likely to feel emotionally prepared than females ( $\chi^2 (1) = 12.29, p < .001$ ).

Emotional preparedness is heightened through understanding bushfire risk and safety. Those who said they felt emotionally prepared also reported having a high understanding of bushfire risk ( $\chi^2 (3) = 16.61, p = .001$ ) and a high understanding of bushfire safety ( $\chi^2 (3) = 11.15, p = .011$ ).

Increased emotional preparedness was linked with people undertaking some aspects of physical preparation. Discussing a bushfire plan was associated with emotional preparedness, with those who had discussed a plan also reported feeling emotionally prepared compared to those who had not,  $\chi^2 (1) = 6.58, p = .010$ .

However, participants who felt emotionally prepared were not more or less likely to have prepared a written plan, or to have practiced that plan (both  $p > .05$ ).

Emotional preparedness was also related to leaving or staying. Although we may expect that those who stay or leave would be similarly emotionally prepared, findings showed that those who had planned to stay and defend their homes were more likely to report feeling emotionally prepared than those had planned to leave ( $\chi^2 (4) = 20.36, p < .001$ ).

However, this difference may have been mediated by physical preparedness. The majority of those who planned to stay and defend were also physically prepared with higher-level preparations, as 70.6 per cent of these participants had installed a fire-fighting pump and hose and two thirds had purchased fire-fighting equipment. For those who did not plan to stay and defend their homes, making the most basic preparations of cleaning gutters was associated with increased emotional preparedness ( $\chi^2 (1) = 9.96, p = .002$ ). That is, being physically prepared, even somewhat prepared, increased emotional preparedness.

We found that strong anxiety led to last minute changes to plans, placing people into dangerous situations, either by leaving late, or attempting to re-enter the fire ground too early. As one participant shared: 'We had a plan to stay...[but] my wife said "I think I'm going to be frightened out of my wits" ...and I said okay lets shut up and we'll go...anyway we woke up about 6 and I said "we've got to go back". I didn't even think about it. How do you so go against all the rules of going into a dangerous area?'

However, importantly, those who felt emotionally prepared prior to the fire felt that they were able to manage anxiety and stress during the fire ( $\chi^2 (1) = 18.51, p < .001$ ) and felt they had some control in an uncontrollable situation ( $\chi^2 (1) = 8.24, p = .004$ ). As identified by Morrissey & Reser (2003) and Rhodes (2003) feeling in control and



being able to manage emotions assist in responding more effectively to a disaster situation.

## CONCLUSION

This research suggests an important shift is needed in bushfire preparedness from focusing almost solely on the physical to including the importance of the psychological.

But what might this look like and how might it be adapted for different people who show important differences in emotional preparedness (e.g. for men and women; for those who stay and those who go)?

In this presentation, we consider the implications of the research findings, such as the gendered nature of psychological preparedness and the lower preparedness of people who leave rather than stay and defend. We look at these issues through an agency lens—what are the challenges for agencies in undertaking psychological preparedness interventions, and what more do we need to know to assist people better in this?

This paper provides a greater understanding of emotional preparedness in a bushfire context, what it is, how it works, and what it effects, with a focus on how we might best work with at-risk people and communities to improve their psychological readiness for bushfires.



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