

# STRESS AND GROWTH EXPERIENCES REPORTED BY POST-BUSHFIRE FIELD RESEARCH INTERVIEWERS

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Cover: A Bushfire and Natural Hazards CRC researcher in the Blue Mountains after the October 2013 fires.

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## ABSTRACT

**Background:** There are numerous reports that those involved in disaster response and recovery are at-risk of developing post-traumatic stress disorder, acute stress reaction, or secondary traumatic stress. There are few reports of research concerning the experiences of post-disaster field research interviewers. During the period 2009–2014, post-bushfire research interviews were conducted with residents affected by seven major bushfire events in four Australian states. This report describes findings from follow-up surveys of those who conducted five of these post-bushfire research interview studies. The aim was to investigate (a) the nature of their experiences; and (b) their perceptions of the adequacy of the training and preparation for the work.

**Method:** Sixty-five post-bushfire research interviewers were contacted and invited to take part in an interview or complete a survey questionnaire about their post-bushfire research experiences. Thirty-three researchers (51%) provided 38 responses: one researcher described experiences on each of three deployments, three researchers described their experiences on each of two deployments.

**Results:** Of the 38 responses, 9 (24%) described no stress symptoms associated with the interviews; 26 (68%) described little to mild levels of stress symptoms; 3 (8%) reported moderate levels of stress symptoms. Twenty three researchers (64%) reported that their experiences overall were positive. Reports about training and preparation were mostly positive.

**Conclusions:** Interviewing residents affected by future disaster events will be psychologically impactful for many who conduct post-disaster field research. For the majority, the experience will probably have some distressing elements, but will be viewed positively overall. A small percentage will experience moderate levels of secondary stress, especially if the event involved multiple fatalities, but this will be relatively transient. The approach to training and preparation used for the post-bushfire field interviews is probably adequate, but needs to be evaluated more rigorously.

## 1. INTRODUCTION

### 1.1 BACKGROUND

There is an extensive literature about the psychological effects of disasters on those impacted directly by disaster events. Studies covering a range of disasters (natural, human-caused, and technological) and communities (both developed and developing) have reported high levels of post-traumatic stress disorder (PTSD), depressive disorders, and substance abuse or dependency among survivors (reviews include those by: McNally, 2003; Nemeroff, Bremner, Foa, Mayberg, North, & Stein, 2006; Neria, Nandi, & Galea, 2008; Norris, Friedman, Watson, Byrne, Diaz, & Kaniasty, 2002). There is also a considerable literature about adverse psychological impacts on those who respond to disasters: police, fire and other rescue workers; emergency and other medical personnel; relief and aid workers; and others involved in post-disaster recovery endeavours (see, for example: Alexander & Klein, 2009; Argentero & Setti, 2011; Bills *et al.*, 2008; Centers For Disease Control, 2006; Cukor *et al.*, 2011; Fullerton, Ursano, & Wang, 2006; Galea, Nandi, & Vlahov, 2005; Neria *et al.*, 2008; North *et al.* 2002; Ozen & Sir, 2004; Palm, Polusny, & Follette, 2004). This literature also implies that many researchers have been involved in collecting data from survivors, responders, and relief and recovery workers in the aftermath of disasters. However, there is little by way of published studies about psychological effects of conducting post-disaster research on those who undertake this research. Greenall and Marselle (2007) described their experiences as researchers conducting interviews with survivors of the 11 September 2001 terrorist attacks on the World Trade Centre





(WTC) in New York, as part of an engineering project investigating evacuation from the WTC following the attacks (for information about that project, see Galea, Lawrence, Blake, Dixon & Westeng, 2007).

When exposed to the traumatic experiences of our participants we sometimes found ourselves psychologically affected by what we were researching...we had tears in our eyes and almost had to halt some interviews for our own benefit, let alone the participant's...this is known as vicarious traumatising: the psychological process of becoming traumatised as a consequence of empathic engagement with survivors and their traumatic stories...we found ourselves re-experiencing 9/11 through recurrent recollections of survivor's stories, and they even formed the basis of occasional nightmares...we experienced feelings of detachment and estrangement...we experienced feelings of dissociation from the normal world...one of our team withdrew from social interaction... (p. 545)

van Zijl de Jong *et al.* (2011) described the work of a research team conducting social impact assessments following the 2009 South Pacific tsunami and noted the importance of researcher debriefing and opportunities to acknowledge their distress. Lund (2012) discussed how crisis-related research, such as post-tsunami recovery and displacement due to civil war, can generate strong emotions in researchers and how these emotions can impact on the research endeavour. Eriksen and Ditrich (2015) proposed that mindfulness can contribute positively to the wellbeing of trauma-exposed disaster researchers. Dominey-Howes (2015) published a personal reflection on the emotional trauma of conducting post-disaster research and offered suggestions on managing researcher trauma. What seems to be lacking are reports of systematic research investigating the experiences of post-disaster researchers which can (a) permit comparisons with findings from research involving other trauma workers, and (b) provide evidence-based guidance for those involved in the planning, management, and conduct of post-disaster research. The study described in this report makes a contribution to remedying this lack.

While there appears to be a dearth of systematic research concerning the impacts of post-disaster research on researchers, several studies have reported adverse psychological effects associated with researchers obtaining and analysing information from individuals about distressing personal experiences such as violence, rape, child abuse, sexual abuse, torture and other particularly sensitive topics, for example: Bahn (2012); Bloor, Fincham, and Sampson (2010); Coles, Astbury, Dartnall and Limjerwala (2014); Coles and Mudaly (2010); Dickson Swift, James, Kippen, and Liamputtong (2008); Dickson Swift, James, Kippen, and Liamputtong (2009); Mazzetti (2013); Wilkes, Cummings, and Haigh (2014); and Woodby, Williams, Wittich, and Burgio (2011). Several of these authors noted that research supervisors and administrators may not always take into account possible negative psychological effects on researchers undertaking research of this nature, and may fail to adequately prepare researchers for the task or support them during and after the research endeavour<sup>1</sup>.

In this report we first discuss conceptual explanations of how those who conduct trauma-related research—including post-disaster interview-based research—can experience negative psychological reactions; we then describe findings from a retrospective study of researchers who conducted post-bushfire field interviews with residents impacted by serious bushfire events in four Australian states over the period 2009-2014.

## 1.2 POST-TRAUMATIC STRESS AND RELATED CONCEPTS

It has long been recognised that some people who survive a life-threatening event (such as a disaster) unscathed physically may experience subsequent severe psychological difficulties (see



Gersons & Carlier, 1992; Jones et al. 2003; McNally, 2003; Shay, 1991). In 1980 the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-III) revision task force included a new diagnostic category of Post-Traumatic Stress Disorder (PTSD) in DSM-III, which defined PTSD as a syndrome arising in response to "...a stressor that would evoke symptoms of distress in almost everyone" (American Psychiatric Association, 1980, p. 238). The diagnosis incorporated three syndrome clusters: recurrent, intrusive thoughts about the traumatic event; trauma-related nightmares; and flashbacks to the traumatic event. Subsequently, the concept of PTSD was elaborated: the DSM-IV included a definition of traumatic exposure which expanded the description of a traumatic stressor in which exposure meant that "...the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others" (American Psychiatric Association, 1994, p. 427). This expanded description implied that an individual who observes or learns about another person's traumatic experiences may be at risk of developing PTSD-related difficulties. Subsequently, the criteria for diagnosing PTSD were modified further to include repeated exposure to aversive details of the traumatic event or events (American Psychiatric Association, 2013). A diagnosis of PTSD requires that the symptom be present for a month or more. An individual who experiences a traumatic stressor and exhibits symptoms of PTSD for a minimum of three days and a maximum of four weeks, within four weeks of the traumatic event, may be diagnosed as having Acute Stress Disorder (ASD, American Psychiatric Association, 2013).

Several authors contributed to a developing appreciation that those whose work involved observing or interacting with victims of traumatic events such as disasters, violent crimes, bereavement, loss and severe deprivation, were potentially at risk of experiencing psychological harm. Raphael (1986) emphasised that first-responders to disaster events were at risk of emotional damage. McCann and Pearlman (1990) proposed the concept of vicarious traumatization to describe the accumulation of memories of clients' traumatic material by therapists, and the consequent negative effects on therapists' world-views. Figley (1995) identified the potential for those who treat traumatised patients or clients to experience secondary traumatic stress.

In their review of potential hazards facing disaster and trauma workers, Palm *et al.* (2004) noted that several terms have been used to describe the adverse psychological effects often reported by these workers, most commonly: *vicarious traumatisisation* and *secondary traumatisisation*. Several authors have observed that the terms 'vicarious traumatisisation' and 'secondary traumatisisation' are often—incorrectly—used interchangeably (e.g., Collins & Long, 2003; Dunkley & Whelan, 2013; Elwood, Mott, Lohr, & Galovski, 2011; Newell & MacNeil, 2010).

McCann and Pearlman (1990) developed their concept of vicarious traumatisisation, within a social-constructivist theoretical framework (Mahoney & Lyddon, 1988), in order to understand the distressing effects upon mental health professionals of working with traumatised clients—survivors of sexual abuse, incest and violence. They described vicarious traumatisisation as: "...the transformation in the inner experience of the therapist that comes about as a result of empathetic engagement with clients' trauma material" (p. 145). These changes in experiences are understood to be associated with alterations in therapists' cognitive schemas: vicarious traumatisisation is said to occur "...when a clinician's beliefs about safety, power, esteem, intimacy, and/or frame of reference become increasingly negative as a result of being exposed to a client's traumatic experiences" (Elwood *et al.*, 2011).

The concept of secondary traumatic stress was defined by Figley (1995) as "...the natural, consequent behaviors and emotions resulting from knowledge about a traumatizing event experienced by a significant other..." (p. 7). The negative effects of this secondary, or indirect,



exposure to a traumatic event resemble closely the effects of primary, or direct, exposure “... with the difference being that exposure to a traumatizing event experienced by one person becomes the traumatizing event for a second person” (Bride, Robinson, Yegidis, & Figley, 2004, p. 27).

Jenkins and Baird (2002) noted that while both secondary traumatic stress (STS) and vicarious traumatic stress (VTS) resulted from contact with traumatised others, and both are associated with PTSD-like symptoms, they differed in four ways:

- (1) STS emphasised symptomatology, while VTS emphasised theory-based self-perceived changes in cognitions.
- (2) STS focused on symptoms as observable reactions; while VTS focused on inferred changes in belief systems.
- (3) STS accommodated a range of populations including medical emergency first responders, police, disaster rescue workers, and trauma workers generally; while VTS focused on mental health professionals providing therapeutic services to traumatised clients.
- (4) STS could result from a single severe exposure, while VTS resulted from cumulative exposure over time.

While the concept of VTS seems to have undergone some revision, and there has been an expansion in populations studied (e.g., Byrne, Lerias, & Sullivan 2006; Sabin-Farrell & Turpin, 2003) the focus of attention has remained on inferred changes in world views, belief systems, and cognitive schemas. STS has continued to focus on observable PTSD-like symptoms of distress (Elwood *et al.*, 2011)<sup>2</sup>.

The purpose of the post-bushfire interviews, which were the stimulus for this report, was to elicit factual information from affected residents about issues related to householder bushfire safety, such as pre-bushfire risk perceptions, planning and preparations; actions on the day of the fire; and safety-related incidents and outcomes (more information about the interviews is provided below). Interviewers did not inquire about mental-health related issues, such as residents’ post-traumatic stress. Further, interviewers were specifically instructed that they were not to engage in counselling with residents, and that ‘helping’ should be limited to providing interviewees with written information which listed contact details for sources of personal, medical and material assistance. Finally, the focus of the present study was on the wellbeing of the interviewers—whether they experienced distress in the course of conducting, and following, their interviews with residents affected by serious bushfire events—not on their world-views or beliefs. Accordingly, we chose to use secondary traumatisation (rather than vicarious traumatisation) as the conceptual framework for the research<sup>3</sup>.

### 1.3 POST-BUSHFIRE RESEARCH INTERVIEWS 2009-2014

Residents of many areas of Australia are at high risk from bushfires (generally called ‘wildfires’ in North America and ‘forest fires’ in Europe). Over the period 1900 –2011, 260 major bushfires in Australia are known to have claimed 825 lives (Blanchi, Leonard, Haynes, Opie, James, & de Oliveira, 2014). Because of the large geographical areas for which they are responsible, and low population densities outside capital cities and major regional centres, Australian rural fire agencies face challenges in responding so as to protect residents when fire threatens. This is especially so for fast moving bushfires under extreme fire danger weather conditions—high temperatures, low relative humidities, and strong winds (McLennan & Birch, 2005; McRae & Sharples, 2011).



Following disastrous bushfires in Victoria on 7 February 2009—in which 172 civilians died and more than 2000 homes were destroyed-- the Bushfire Cooperative Research Centre<sup>4</sup> (BCRC) established a bushfires research task force to investigate aspects of the fires. An important component of the task force's work was to conduct interviews with householders impacted by fires in eight locations identified by authorities as the worst-affected fire areas in terms of fatalities and house losses. Researchers visited properties and interviewed residents about their pre-bushfire risk perceptions, plans and preparations; warnings received on the day of the fire; and actions on the day. The findings are reported in McLennan, Elliott, Omodei and Whittaker (2013) and Whittaker, McLennan, Elliott, Gilbert, Handmer, Haynes, and Cowlshaw (2009).

Following this initial study, the BCRC undertook five further post-bushfire interview studies (twice in Western Australia--WA--in 2011, and twice in New South Wales--NSW--in 2013; and once in Tasmania in 2013), while the Bushfire and Natural Hazards Cooperative Research Centre<sup>5</sup> (BNHCRC) undertook a study in WA in 2014 (the seven fire events studied are summarised in Table 2). Each study was carried out by a university department which obtained ethics committee approval for the research. Across all the studies most participants were interviewed at their properties, following publicity in local media about the study. Because of the damage to local infrastructure and the numbers of displaced residents it was not possible to recruit random samples of households. However, those interviewed represented a range of property locations and types, household compositions, and fire outcomes—where homes had survived intact, been damaged, or destroyed. Interviews were conducted at properties in or adjacent to the more severely-burned areas, where residents were present on those days on which interview teams were in the local area. Leaflets were left at properties where residents were absent inviting them to contact the research administrator and arrange for an interview—either by telephone or in person at an agreed time and location. Almost all those approached agreed to be interviewed; there were very few refusals and these were due mostly to residents not being available to be interviewed at that time.

Each study used a semi-structured interview methodology. The interview guides used in each instance were similar in overall format and content, although they differed in matters of detail according to (a) the specific natures of the fires and the affected communities; and (b) the community safety issues identified by the fire agency as priorities for inquiry (for an example, see Appendix A). Interviews were audio-recorded. For the 2009 Victorian study and the first study in WA (McLennan, Dunlop, Kelly, & Elliott, 2011), all interviews were transcribed and content-analysed using the *NVivo* (QSR International, Melbourne Australia) text management software tool. In the remaining five studies, interview content summary checklists were completed by members of two-person interview teams during the course of each interview, and checked for completeness and agreement by the team following each interview), and a sample of interviews was transcribed and content-analysed. This change was made to save time and reduce cost. There is no evidence that the change degraded the quality of information obtained from households. For each of the seven studies, a report was prepared for the relevant fire agency (Boylan, Cheek, Skinner, 2013; Heath, Nulson, Dunlop, Clark, Burgelt, & Morrison, 2011; Mackie, McLennan, & Wright, 2013; McLennan *et al.*, 2011; McLennan, 2014; McLennan, Elliott, & Omodei, 2011; McLennan, Wright, & Birch, 2013) and full details of the procedures followed in each study are described in these reports. McLennan, Paton and Wright (2015) analysed the major community bushfire safety-related findings and trends across all seven studies.

For the 2009 Victorian bushfires deployments, researchers travelled to properties accompanied by fire agency staff, who undertook building damage and fire behaviour assessments, but most interviews were conducted by the researcher alone. For the second 2011 WA (Perth Hills) fire and the 2013 Tasmanian fire, interviews were conducted by pairs of researchers. For the other four deployments, each research interviewer was accompanied by a fire agency staff member.





For all seven studies, health and safety issues for the research interviewers were a high priority for chief investigators and research managers. Those recruited as field researchers were expected to have previous interviewing experience, preferably about sensitive topics. Before going into the field, research teams were briefed about the bushfire event by a fire agency staff member. Team members undertook training in interview procedures, were instructed on their legal and ethical responsibilities, and were briefed on relevant occupational health and safety issues associated with being in a bushfire-affected area. Team members were reminded of the possibility that some interviews could be stressful, were advised about ways to manage these, and were provided with written information about stress management and self-care during the deployment and afterwards (for an example, see Appendix B). Throughout the course of each deployment, research managers ensured provision of personal and material support for their research teams.

## 1.4 AIM OF THE PRESENT STUDY

There is widespread agreement among researchers and emergency services personnel that ongoing changes in climate and human settlement patterns in Australia may increase the probability of natural disasters in the future (for example, Hennessy, Lucas, Nicholls, Bathols, Suppiah, & Ricketts, 2006/2013; Wasko & Sharma, 2015). The Bushfire and Natural Hazards Cooperative Research Centre (BNHCRC) may thus be asked to respond to future requests from emergency services agencies for researchers to go into the field to interview survivors about their experiences quite soon after disaster events such as bushfires, floods, storms and cyclones.

There was anecdotal evidence that some of the post-bushfire research interviewers involved in the studies described above may have experienced distress during some of the deployments. It was therefore deemed necessary to investigate in a systematic manner the experiences of those involved in the program of post-bushfire interviews 2009-2014 in order to ensure that future post-disaster field research interviewers are suitably prepared for their tasks.

The aim of the present study was to investigate: (a) the nature of any stress-related experiences of the 2009 – 2014 BCRC and BNHCRC post-bushfire research interviewers: (i) characteristics of stressful interviews, (ii) how any stress was managed, (iii) how often any symptoms of stress were experienced up to a week following the deployment, (iv) whether any symptoms were experienced a month after the deployment; and (b) how well prepared research interviewers believed they had been for their work.

## 2. METHOD

### 2.1 PARTICIPANTS

The BCRC and BNHCRC office had email contact details of the research interviewers for five of the seven post-bushfire interview studies conducted: in NSW, Tasmania, Victoria, and WA in 2014. All were contacted. Of the 65 research interviewers, 33 responded (a 51% response rate), providing 38 responses (one researcher described three deployments, three researchers each described two deployments). The demographic characteristics of those who participated in the retrospective study of post-bushfire field researchers are summarised in Table 1: 20 (61%) were females and 13 (39%) were males. Their mean age at the time of first deployment was 43.4 years (SD = 14.33 years). Nineteen (57%) had a postgraduate qualification, 13 (39%) had an undergraduate degree, one had a diploma. The majority (22, 66%) had backgrounds in behavioural or social science. The majority (24, 73%) were university employees, nine (27%) were postgraduate students.



## 2.2 MEASURES

A questionnaire was constructed in two formats, with identical question content: as an interview protocol suitable for use in both face-to-face and telephone interview settings; and as a self-administered survey-type questionnaire. A copy of the self-administered questionnaire is at Appendix C.

The questionnaire comprised 14 questions grouped in 9 sections:

- Demographic details of post-bushfire field researchers: gender; age; highest academic qualifications and main study discipline; occupation, and previous interview training and experience.
- The bushfire location; number of household interviews conducted by the researcher; whether any interviews were associated with negative emotions; the nature of the most negatively impactful interview (if any).
- The threat-level experienced by the interviewee during the fire as described in the most negatively impactful interview (if applicable).
- Features of that interview (if applicable): losses described; impact on the interviewee's world-view; emotions experienced by the interviewee; the researcher's emotions associated with the interview; any stress-reactions experienced by the researcher associated with the interview; how the researcher managed these reactions—during the interview, and subsequently.
- How well the study organisers had prepared the researcher.
- A 20-item self-report secondary stress measure (see below).
- Any of these 20 stress reactions experienced a month or more after the interviews?
- Any lasting effects of the interviewing experience on the researcher?
- Any additional comments about the researcher's post-bushfire field interview experiences and prior preparation.

A 20-item self-report measure of post-bushfire researcher secondary stress symptoms was constructed. Seventeen of the 20 items are based on the Secondary Traumatic Stress Scale (STSS; Bride, Robinson, Yegidis & Figley, 2004). The use of the STSS as a measure of secondary traumatic stress in a range of studies of trauma workers was noted by Elwood *et al.* (2011) in their review of secondary and vicarious stress measures. Salstom and Figley (2003) commented favourably on the psychometric properties of the STSS. The 17 items of the STSS comprise three sub-scales, corresponding to the three PTSD symptom clusters identified in DSM IV: Intrusion, Avoidance, and Arousal. Some items were modified slightly to take into account that the interviews were with bushfire affected residents and did not have a therapeutic focus.

Two additional items are from the depression sub-scale of the Depression, Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995). These were included because previous informal accounts from some post-bushfire research interviewers suggested they may have experienced mild and transient symptoms of dysphoria (*a state of unease or generalized dissatisfaction with life*) and anhedonia (*inability to feel pleasure in normally pleasurable activities*) during their deployment. One additional item is from the Acute Stress Disorder Scale (ASDS; Bryant, Moulds & Guthrie, 2000). This was included because previous informal accounts from some interviewers suggested they might have experienced mild and transient symptoms of de-realization (*a feeling that one's surroundings are not real*) following their return from a deployment.

The instructions for completing the measure were: *"The following is a list of negative experiences. Did you experience any of the following **during your time in the bushfire affected area and up to a week after the interviews?**"* All 20 items are answered on a five-point scale as proposed by Bride *et al.* (2004): 1 = *No, I never experienced this*; 2 = *Once or twice*; 3 = *On several occasions*; 4 = *Often*; 5 = *A lot-almost every day*. Total secondary stress scores could thus range from 20 to 100, with a score of 20 meaning that no secondary stress symptoms were reported. All the items are shown in Table 4. The internal consistency reliability (Cronbach's alpha)



coefficient was high ( $\alpha = .91$ ;  $N = 33$ ), with the item “I expected something bad to happen in my life” deleted because no researchers reported this symptom (see Table 4).

## 2.3 PROCEDURE

Approval for the study was obtained from the La Trobe University Human Ethics Committee. As indicated previously, the BCRC and BNHCRC offices had contact details of those research interviewers who participated in five of the seven studies (see Table 2). With the exception of those who had conducted interviews following the 2009 Victorian bushfires, researchers were contacted by the BCRC or BNHCRC office, by email, between two and three months after their post-bushfire deployment. The researchers who had conducted interviews in February and March 2009 following the 7 February 2009 Victorian bushfires were contacted by email in April 2014. The email messages invited the researchers to participate in a follow-up survey, provided a Participant Information Statement describing the study, and requested interested individuals to contact a research assistant via an email address.

Participants contacted the research assistant, who either conducted an interview (face-to-face or via telephone) or sent a questionnaire as an email attachment for return via email or by post—as noted previously, both the interview protocol and the questionnaire were identical in question content. The research assistant de-identified all material provided by participants to protect their anonymity during subsequent analyses of responses. Approximately three weeks after the initial invitation, the BCRC or BNHCRC office sent a reminder email to all research interviewers involved in the particular deployment thanking those who had responded and reminding those who had not done so to contact the research assistant. There was no further follow-up. Of the 38 responses provided by the 33 researchers, 32 were survey questionnaires and six involved interviews: two face-to-face, four via telephone. The interviews took between 30 minutes and 45 minutes.

**Table 1: Demographic characteristics of the interviewers (N = 33)**

Characteristic			
<b>Age<sup>a</sup></b>	Mean = 43.4 years		
	SD = 13.33 years		
		<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>	Male	13	39%
	Female	20	61%
<b>Highest qualification</b>			
	Doctoral degree	14	42%
	Masters degree	5	15%
	Four-year degree	12	36%
	Three-year degree	1	3%
	Diploma	1	3%
<b>Discipline</b>			
	Psychology	12	36%
	Social Science	10	30%
	Medicine/Nursing/Health Science	5	15%
	Environmental Science	2	6%
	Other	4	12%
<b>Employment</b>			
	Academic staff	15	45%



	Research staff	6	18%
	Research Assistant	2	6%
	PG student	9	27%
	University administration	1	3%
<b>Previous interviewing experience<sup>b</sup></b>			
	Research interviewing	24	71%
	Interviewing about sensitive issues	20	59%
	Counselling	12	35%

<sup>a</sup> age at time of first post-bushfire interview deployment

<sup>b</sup> participants could report more than one type of previous interviewing experience

## 2.4 ANALYSES

Quantitative data from the returns were analysed using the *IBM-SPSS Version 21* statistical analysis software tool (IBM-SPSS, Armonk, New York, US). Because of rounding to integers, some percentages in the tables may not sum to 100%. The findings from the quantitative analyses are reported in sub-sections 3.2 to 3.7 of the Results. Written responses provided by participants were analysed for content. Themes are summarised in sub-section 3.9 and the responses are in Table 7.

## 3. RESULTS

### 3.1 OVERVIEW

The results are presented in sub-sections 3.2 to 3.9. The contents of each are listed below. These are in the same order in which the corresponding questions were presented during the interviews and survey questionnaire (Appendix C):

- 3.2 Respondents and response rates.
- 3.3 Fire events and interviews conducted.
- 3.4 Features of emotionally stressful interviews.
- 3.5 Managing reactions to emotionally stressful interviews.
- 3.6 Secondary stress symptoms reported.
- 3.7 Secondary stress symptoms reported by researchers one month after post-bushfire interviews.
- 3.8 Comparison with other reports of secondary stress.
- 3.9 Researchers' accounts of their experiences and their training and preparation.

Some quotations from researchers have been incorporated to illustrate particular issues. All the written or transcribed comments made by researchers are shown in Table 7.

### 3.2 RESPONDENTS AND RESPONSE RATES

Contact details were available for 65 research interviewers who had participated in one or more of the five post-bushfire studies listed in Table 2. A total of 38 responses were received from 33 researchers, an overall response rate based on individuals of  $33/65 = 51\%$ . One researcher provided three responses; three researchers each provided two responses. This corresponds to





a response rate based on invitations to participate across the five deployments of 38/70 = 54% (see Table 2). Of the 38 responses, 6 were in the form of interviews and 32 were questionnaire returns. No differences in overall patterns of responses between the two formats were evident.

### 3.3 FIRE EVENTS AND INTERVIEWS CONDUCTED

Table 2 summarises the bushfire events studied 2009-2014. The bushfires which occurred in Victoria on 7 February 2009 stand out as being the most severe of the five fire events in relation to deaths and property losses, and it might be expected that researchers who conducted interviews following those fires were more likely to experience higher levels of stress compared with researchers who conducted interviews following the other four fire events. Across all five studies, a total of 1,265 interviews were conducted by researchers. The average number of interviews conducted per researcher across the five studies was 18. The number of interviews conducted by researchers for any given study ranged from 5 to 54.

**Table 2: Post-bushfire household interviews summary: dates, localities and fires; areas and properties; interviews conducted, interviewer responses and response rates across each of the five studies.**

<i><b>Studies, Localities &amp; Fires</b></i>	<i><b>Areas &amp; properties</b></i>	<i><b>(Interviews), Interviewer Responses/ Interviewers (study response rate %)</b></i>
<b>1. 7 February 2009 – Black Saturday-Victoria:</b> Beechworth, Bendigo, Bunyip, Churchill, Horsham, Kilmore East, Murrindindi, Narre Warren. Fire Danger Rating: <i>Extreme</i> . 172 civilian fatalities; 2000+ homes destroyed; 59 business premises destroyed	Many areas: mostly rural farming; small rural towns; large 'lifestyle' properties; some standard sized (~0.1 ha) properties on bushland-residential fringes	(496 interviews); <b>9/12 (75%)</b>
<b>2. 3-4 January 2013, South-eastern Tasmania:</b> Boomer Bay; Connelly's Marsh; Copping, Dunalley; Eaglehawk Neck; Forcett; Primrose Sands; Taranna. Fire Danger Rating <i>Severe-Catastrophic</i> ; 193 homes and significant infrastructure buildings destroyed	Many areas: rural farming; small rural towns; large 'lifestyle' properties; standard sized (~0.1 ha) properties on bushland-residential fringes; coastal resort hamlets; weekend 'shacks'; commercial premises.	(245 interviews); <b>17/30 (57%)</b>
<b>3. 8-18 January 2013, NSW:</b> Coonabarabran; Yass; Shoalhaven region (Sussex Inlet). Fire Danger Ratings <i>Extreme-Catastrophic</i> ; 53 homes destroyed and many thousands of stock killed	Many areas: mostly rural farming; rural towns; large 'lifestyle' properties; some standard sized (~0.1 ha) properties on bushland-residential fringes; some commercial premises.	(238 interviews); <b>7/12 (58%)</b>
<b>4. 13-23 October 2013, NSW:</b> greater Blue Mountains Port Stephens; Wingecarribee Shire (Bargo). Fire Danger Ratings <i>Extreme-Catastrophic</i> ; 221 homes destroyed	Many areas: rural farming; rural towns; many large 'lifestyle' properties; many standard sized (~0.1 ha) properties on bushland-residential fringes; some agribusiness premises	(194 interviews); <b>4<sup>b</sup>/12 (33%)</b>



<b>5. 12 January 2014, WA:</b> Perth Hills – Parkerville, Stoneville, Mt. Helena. Fire Danger Rating <i>Extreme</i> ; 57 homes destroyed	A semi-rural area: large ‘lifestyle’ properties and standard sized (~0.1 ha) properties on bushland-residential fringes	(91 interviews); <b>1<sup>c</sup> /4 (25%)</b>
<b>TOTAL</b>		(1264 interviews); <b>38<sup>d</sup> /70 (54%)<sup>e</sup></b>

<sup>a</sup> Note that no civilian fatalities were reported for any of the fires listed (2 – 5) subsequent to the 7 February 2009 Black Saturday Victorian fires.

<sup>b</sup> Three other interviewers reported having nothing to add to previous responses.

<sup>c</sup> One other interviewer reported having nothing to add to a previous response.

<sup>d</sup> The 38 responses were provided by 33 interviewers.

<sup>e</sup> The total number of individual interviewers contacted was 65, the overall interviewer response rate was thus 33/65 = 51%

### 3.4 FEATURES OF EMOTIONALLY STRESSFUL INTERVIEWS

Twenty of the 38 responses described emotionally stressful interviews; 18 researchers responded: one researcher described three interviews, one from each of three deployments. Characteristics of these stressful interviews are summarised in Table 3. In 12 (60%) of these interviews, the resident described surviving a level of threat to life which was either “Extreme” (n = 9, 45%: *odds were about even for surviving vs perishing*) or “Severe” (n = 3, 15%: *any significant worsening of the situation might well have lead to death or serious injury*), based on an ordinal seven-level bushfire threat to life severity scale proposed by McLennan and Elliott (2011), a copy is in Appendix C. In seven (35%) of these interviews, the resident reported the death of either a family member (n = 2, 10%) or a friend/neighbour (n = 5, 25%)—all these reports were from researchers who conducted interviews following the 2009 Victorian bushfires. In 13 of the 20 interviews (65%) the resident reported the loss of the family home. For some researchers, it was not only interviews which were stressful, but also the environmental context in which they were conducted:

I was not really prepared for suddenly being in the midst of the almost total destruction; with the smells of dead animals, cracked septic tanks, rotting food in refrigerators and freezers in burned houses; heat, fine grit in the eyes at the slightest puff of wind; totally blackened and bare landscapes; interviewing people who had lost home, neighbours, family members, animals; surrounded by Coroner’s Office tapes around properties where bodies had been located and removed by police. (2009 Victorian bushfires, researcher #001)

For other researchers it was not so much particular interviews proving difficult, but the cumulative impact of interviews:

No single interview. There was cumulative fatigue from the combined interviewing experiences over several days. (2009 Victorian bushfires, researcher #003)

From researchers’ perspectives, in nine interviews (45%) the effect of the fire on the residents’ world-view was that the world was seen as “unfair”, in another nine the impact was that the world was seen as “random and unpredictable”.



So many interviews. The sense that their whole world had changed, and the desolation and loss of hope they experienced. The randomness of the losses, and the small differences between living and dying. (2009 Victorian bushfires, researcher #009)

The three most frequent resident emotional reactions evident during the interview were reported to be: “sorrow” (14, 70%); “grief” (13, 65%); and “anger” (10, 50%).

The most frequently reported feelings experienced by researchers during the interview were “sadness” (14, 70%) and “powerlessness” (8, 40%). The most frequent reactions during the interview reported by researchers were “sadness” (11, 55%) and “holding back tears” (8, 40%).

Overall, the interviews raised feelings of sadness at the impacts on households, the community, the loss of bushland and especially the loss of animals and wildlife. (2013 Tasmanian bushfire, researcher #26)

### 3.5 MANAGING REACTIONS TO EMOTIONALLY STRESSFUL INTERVIEWS

Table 3 summarises how researchers managed their reactions to the stressful interviews. The most frequent methods of managing negative emotional experiences during an interview were (a) to concentrate on the interviewer role and focus on listening (15, 75%), and (b) try to show understanding to the resident (11, 55%).

Following the stressful interview, “talking about it” was the most frequently reported method used by researchers to manage their negative reactions: with a fellow-researcher (16, 80%); with a family member by phone (7, 35%); with the research leader (3, 15%). Engaging in physical exercise was the reported way of managing for six researchers (30%). Other ways of managing reported were: a period of social withdrawal (5, 25%); and drinking more alcohol than usual (4, 25%). Researchers’ ways of managing after the deployment concluded followed a similar pattern. Talking was the most frequent method: with family (16, 80%); with a colleague (6, 30%); with a supervisor (1, 5%). No one reported seeking help from a professional counsellor. Six (30%) researchers used physical activity, while four (20%) immersed themselves in work, and three (15%) drank more alcohol than usual.

**Table 3: Features of interviews which researchers reported as notably emotionally distressing and how they managed these**

Table 3: Features of interviews which interviewers reported as emotionally distressing and how researchers managed their reactions (N = 20) Primary Features		Frequency	Percent
<i>Level of threat described by the interviewee</i>			
	7 – Extreme	9	45%
	6 – Severe	3	15%
	5 – Serious	1	5%
	4 – Significant	3	15%
	3 – Moderate	2	10%
	2 – Low	1	5%



	1 – Minimal	0	--
	0 – None	1	5%
<b><i>Loss described by the interviewee<sup>a</sup></i></b>			
	Family member	2	10%
	Friends/neighbours	5	25%
	House	13	65%
	Pet	8	40%
	Valuables	12	60%
	Memorabilia	13	65%
	Financial/economic	13	65%
	Community	8	40%
	Future	8	40%
<b><i>Apparent impact on the interviewee's view of his/her world<sup>a</sup></i></b>			
	Hostile	1	5%
	Unfair	9	45%
	Uncaring	4	20%
	Indifferent	1	5%
	Random/unpredictable	9	45%
<b><i>Interviewee's evident emotions<sup>a</sup></i></b>			
	Grief	13	65%
	Sorrow	14	70%
	Guilt	6	30%
	Anger	10	50%
	Resignation	8	40%
<b><i>Researcher's feelings during the interview<sup>a</sup></i></b>			
	Helplessness	5	25%
	Powerlessness	8	40%
	Futility	4	20%
	Sadness	14	70%
	Frustration	1	5%
<b><i>Researcher's reactions to the interview<sup>a</sup></i></b>			
	Upset	5	25%
	Holding back tears	8	40%
	Sadness	11	55%
	Anger	4	20%
	Despair	1	5%
	Helplessness	1	5%
	Over-empathising	6	30%
<b><i>Researcher management of negative experiences during the interview<sup>a</sup></i></b>			
	Concentrated on role, focussed on listening	15	75%
	Tried to re-assure/comfort the interviewee	9	45%





	Tried to show understanding	11	55%
	Tried to ignore/suppress negative feelings	3	15%
<b><i>Researcher's management of negative reactions after the interview<sup>a</sup></i></b>			
	Went off by self to be alone	5	25%
	Talked with a peer	16	80%
	Talked with a leader	3	15%
	Talked with a family member	7	35%
	Drank more alcohol than usual	4	25%
	Engaged in physical activity	6	30%
<b><i>Researcher's management of negative reactions a week after the interview<sup>a</sup></i></b>			
	Talked with a family member	16	80%
	Talked with a colleague	6	30%
	Talked with a supervisor	1	5%
	Talked with a counsellor	--	--
	Drank more alcohol than usual	3	15%
	Engaged in physical activity	6	30%
	Immersed myself in work	4	20%

<sup>a</sup> Note that interviewers could report more than one.

### 3.6 SECONDARY STRESS SYMPTOMS REPORTED

Table 4 lists the frequency with which each of the 20 symptoms of secondary stress was reported by research interviewers in their 38 responses. Four symptoms were reported by more than 25% of responders:

- I thought about some of the interviews when I didn't intend to [Intrusion]: 58%
- Reminders of some of the interviews upset me [Intrusion]: 47%
- I thought that I did not want to do any more interviews like these [Avoidance]: 29%
- I avoided things that reminded me of some of the interviews [Avoidance]: 26%.

Dysphoria (I felt down-hearted and 'blue') was reported by 24% of responders. Anhedonia (I was unable to become enthusiastic about anything) was reported by 10% of responders. De-realisation (Things around me did not seem real) was reported by 8% of responders.

The 20-item secondary stress scale (SSS) totals could range from 20 (no symptoms) to 100. The mean total score for the 38 responses was 26.5 (SD = 8.17). Figure 1 shows the distribution of the 38 total scores as a histogram. The most frequent—or modal--SSS total score (24%) was 20, that is, **no** symptoms. Five scores appear to be elevated relative to the remainder. These five relatively elevated SSS totals were reported by four researchers (two were from the same researcher). Two were associated with interviews following the 2009 Victorian 'Black Saturday' bushfires; two were associated with interviews following the January 2013 Tasmanian bushfire; one was associated with interviews following the NSW October 2013 bushfires. (Some comparative normative information about secondary stress symptoms is provided in Table 6).



Several analyses were conducted to determine if total secondary stress scale (SSS) scores were related to demographic characteristics of the researchers or to features of the bushfire events. SSS scores were not related to any of the demographic characteristics of the researchers. The only meaningful relationship found was with severity of the bushfire event. SSS total scores were significantly higher overall for the nine researchers who conducted interviews following the 2009 Victorian 'Black Saturday' bushfires compared with researchers' scores for the other four fire events. Because of the high positive skew of the score distributions (see Figure 1), and the unequal numbers of responders being compared, a Mann-Whitney U-Test was employed to compare the nine VSS total scores from the Black Saturday researchers with the 24 researchers' SSS total scores from the other four post-bushfire studies (where a researcher had been deployed following two or more fires, only their first deployment score was used): Black Saturday researchers' ( $n = 9$ ) mean rank = 23.0; other researchers' ( $n = 24$ ) mean rank = 14.75; Mann-Whitney  $U = 54.5$ ;  $Z = 2.196$ ;  $p = .029$ .

There was additional evidence confirming the relatively greater impact of the 2009 Victorian 'Black Saturday' bushfires on researchers. Of the nine (different) researchers involved, all reported some SSS symptoms, and two of the nine were in the cluster of four relatively high SSS scorers (see Figure 1). Of the nine researchers, eight commented on the stressful nature of their interviewing experience (see *Section 3.8*). Comparable proportions for researchers who conducted interviews following the other four bushfire events were much smaller (Tables 2 & 7).



**Table 4. Frequency of research interviewers reporting secondary stress symptoms during and up to a week following a period of conducting post-bushfire field interviews (N = 38) <sup>a</sup>**

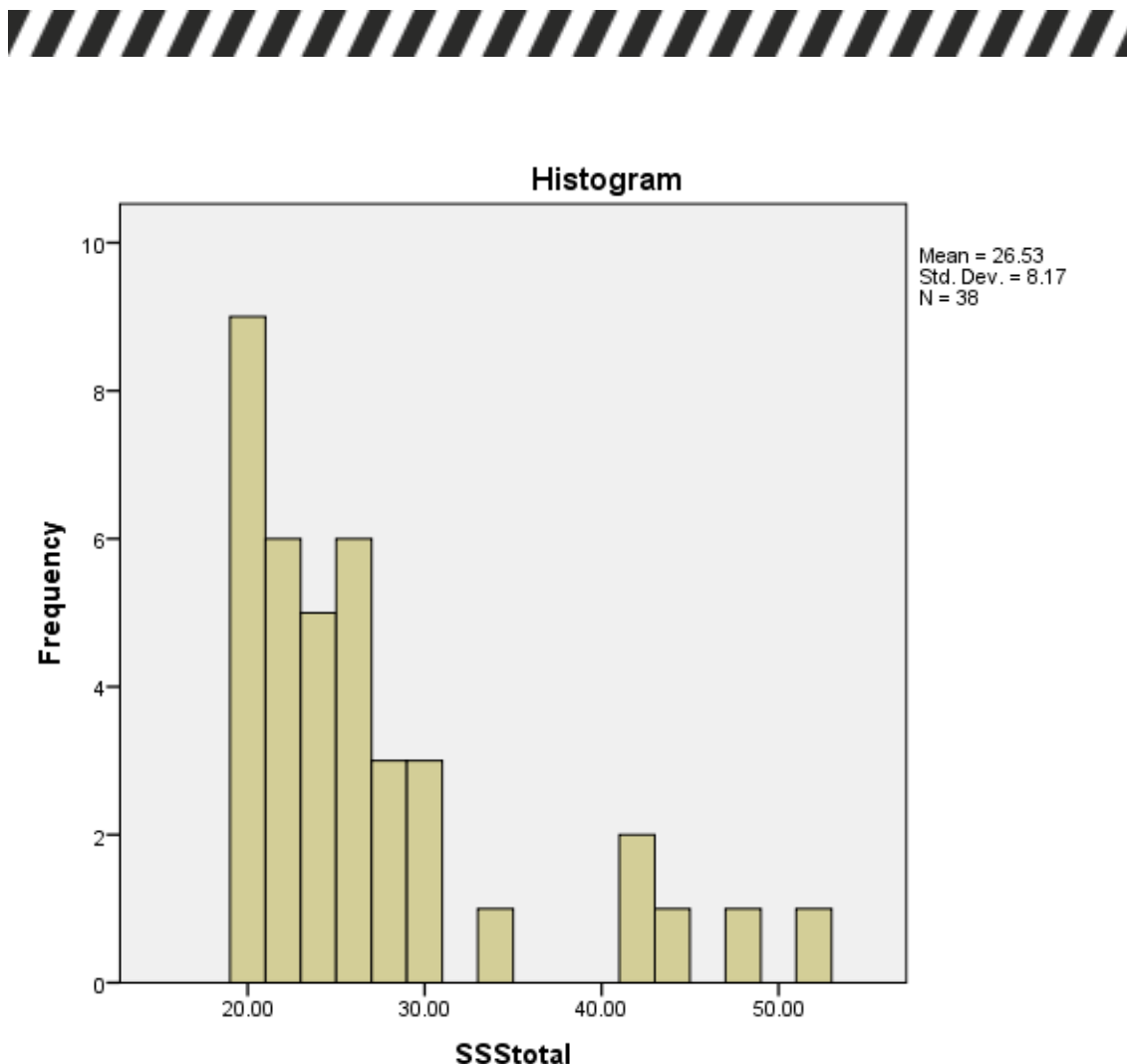
<b>Secondary stress symptoms<sup>b</sup></b>	<b>No, never (1)</b>	<b>Once or twice (2)</b>	<b>Several times (3)</b>	<b>Often (4)</b>	<b>A lot (5)</b>	<b>Item Mean</b>	<b>Item SD</b>
I thought about some of the interviews when I didn't intend to [I]	16 (42%)	9 (24%)	8 (21%)	4 (11%)	1 (3%)	2.08	1.15
Reminders of some of the interviews upset me [I]	20 (53%)	12 (32%)	4 (11%)	2 (5%)	--	1.68	0.87
I thought that I did not want to do any more interviews like these [AV]	27 (71%)	5 (13%)	6 (16%)	--	--	1.45	0.76
I avoided things that reminded me of some of the interviews [AV]	28 (74%)	3 (8%)	3 (8%)	3 (8%)	--	1.58	1.11
I felt emotionally numb [AV]	29 (76%)	5 (13%)	4 (11%)	--	--	1.34	0.67
I had trouble sleeping [AR]	29 (76%)	5 (13%)	2 (5%)	2 (5%)	--	1.39	0.82
I felt down-hearted and 'blue' <sup>c</sup>	29 (76%)	4 (11%)	3 (8%)	2 (5%)	--	1.42	0.86
I had little interest in being around other people [AV]	29 (76%)	5 (13%)	3 (8%)	1 (3%)	--	1.37	0.75
I had trouble concentrating [AR]	29 (76%)	5 (13%)	2 (5%)	2 (5%)	--	1.39	0.82
It seemed as if I was re-living the fire as experienced by the residents [I]	30 (79%)	7 (18%)	1 (3%)	--	--	1.24	0.49
I felt discouraged about the future [AV]	31 (82%)	3 (8%)	4 (11%)	--	--	1.29	0.65
My heart started pounding when I thought about some of the interviews [I]	32 (84%)	6 (16%)	--	--	--	1.16	0.37
I was easily annoyed [AR]	32 (84%)	3 (8%)	2 (5%)	1 (3%)	--	1.26	0.69
I found I couldn't remember some of the interviews [AV]	32 (84%)	4 (11%)	2 (5%)	--	--	1.26	0.72
I had disturbing dreams which seemed related to the interviews [I]	33 (87%)	5 (13%)	--	--	--	1.13	0.34
I felt jumpy [AR]	34 (90%)	4 (10%)	--	--	--	1.11	0.31
I was unable to become enthusiastic about anything <sup>c</sup>	34 (90%)	3 (8%)	1 (3%)	--	--	1.13	0.41
I was less active than usual [AV]	35 (92%)	1 (3%)	2 (5%)	--	--	1.13	0.47
Things around me did not seem real <sup>d</sup>	35 (92%)	2 (5%)	1 (3%)	--	--	1.11	0.39
I expected something bad to happen in my life [AR]	38 (100%)	--	--	--	--	--	--

<sup>a</sup> Items are arranged in descending order of frequency of reporting. The 38 responses were provided by 33 research interviewers.

<sup>b</sup> Items were based on those from the Secondary Traumatic Stress Scale (STSS; Bride *et al.* 2004) except where otherwise noted; [I] = item from the STSS Intrusion sub-scale; [AV] = item from the STSS Avoidance sub-scale; [AR] = item from the STSS Arousal sub-scale.

<sup>c</sup> Items from the Depression sub-scale of the Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 1995).

<sup>d</sup> Item from the Acute Stress Disorder Scale (Bryant *et al.* 2000).



**Figure 1: Secondary stress scale (SSS) total scores (possible range: 20 – 100): N = 38 responses**

### 3.7 SECONDARY STRESS SYMPTOMS REPORTED BY RESEARCHERS ONE MONTH OR MORE AFTER POST-BUSHFIRE INTERVIEWS

Table 4 shows the frequency with which research interviewers reported secondary stress symptoms one month or more after conducting post-bushfire field interviews. The 24 reported symptoms encompassed 12 of the 20 symptoms, and were reported in 10 responses from 9 research interviewers (one researcher provided responses in relation to two deployments): five responses were from Black Saturday researchers; four were from Tasmania 2013 researchers; one was from a NSW October 2013 researcher. The most frequently reported symptoms were from the Intrusion and Avoidance STSS sub-scales. Some researchers commented that they sometimes still felt concern for those interviewed.

I still think about that couple and wonder how the husband is doing. It still makes me uneasy thinking about it. (2013 Tasmanian bushfire, researcher #019)

I am still concerned about the plight of those who were dispossessed and displaced as a result of the fires; especially older people who had experienced a major loss to their way of life and community. (2013 Tasmanian bushfire, researcher #021)



**Table 5. Frequency of interviewers reporting secondary stress symptoms more than one month after conducting post-bushfire field interviews (N = 38)<sup>a</sup>**

Stress symptoms	Frequency (%)	Fire event X frequency
I avoided things that reminded me of some of the interviews [AV]	4 (10%)	Victoria 2009 = 3; Tasmania 2013 = 1
I thought about some of the interviews when I didn't intend to [I]	3 (8%)	Tasmania = 2; Victoria 2009 = 1
Reminders of some of the interviews upset me [I]	3 (8%)	Victoria 2009 = 1; Tasmania 2013 = 1; NSW October 2013 = 1
I had little interest in being around other people [AV]	3 (8%)	Victoria 2009 = 1; Tasmania 2013 = 1; NSW October 2013 = 1
I thought that I did not want to do any more interviews like these [AV]	2 (5%)	Victoria = 2
I felt down-hearted and 'blue' <sup>c</sup>	2 (5%)	Tasmania 2013 = 1; NSW October 2013 = 1
I felt discouraged about the future [AV]	2 (5%)	Tasmania 2013 = 1; NSW October 2013 = 1
I felt emotionally numb [AV]	1 (3%)	Victoria 2009 = 1
I had trouble sleeping [AR]	1 (3%)	Victoria 2009 = 1
I was easily annoyed [AR]	1 (3%)	Tasmania 2013 = 1
I felt jumpy [AR]	1 (3%)	Victoria 2009 = 1
I was unable to become enthusiastic about anything <sup>c</sup>	1 (3%)	Victoria 2009 = 1
<b>Total</b>	<b>24<sup>d</sup></b>	<b>Victoria 2009 = 12; Tasmania 2013 = 8; NSW October 2013 = 4</b>

<sup>a</sup> Items are arranged in descending order of frequency of reporting. The 24 symptom reports were from 10 responses (26%) provided by 9 researchers (27%).

<sup>b</sup> Items were based on those from the Secondary Traumatic Stress Scale (STSS; Bride *et al.* 2004) except where otherwise noted; [I] = item from the STSS Intrusion sub-scale; [AV] = item from the STSS Avoidance sub-scale; [AR] = item from the STSS Arousal sub-scale.

<sup>c</sup> Items from the Depression sub-scale of the Depression, Anxiety and Stress Scale (Lovibond & Lovibond 1995).

<sup>d</sup> The 24 symptom reports were in 10 responses from 9 research interviewers: five responses were from Black Saturday researchers; four were from Tasmania 2013 researchers; one was from a NSW October 2013 researcher.



### 3.8 COMPARISON WITH OTHER REPORTS OF SECONDARY STRESS

As the doyen of early psychotherapeutic efficacy research, the late Professor Sol Garfield, declared (apparently in several forums): “No comparison? No conclusion!” (Garfield, 1996). In an attempt to meet this challenge, scores were calculated for the 38 researchers’ responses to the 17 items from Bride *et al.*’s (2004) Secondary Traumatic Stress Scale (STSS) used in the 20-item Secondary Stress Scale (SSS). Scores on the STSS could range from 17 (no symptoms) to a maximum of 85. The distribution of post-bushfire researchers’ scores is shown in Figure 2. Summary statistics are in Table 6, together with all published comparative normative data for the STSS<sup>6</sup>.

The STSS total mean score for the 38 post-bushfire researcher responses was 22.9 ( $SD = 6.89$ ). Scores ranged from 17 (no symptoms) to a maximum of 42. The unweighted mean of STSS total scores for the 12 comparative studies located was 33.3 ( $SD = 11.86$ ). The standardised difference between the two means (33.3 versus 22.9) was Cohen’s  $d = 1.07^7$ . This value represents a “large” difference (Cohen, 1992) between the two means—that for the post-bushfire researchers was appreciably lower. Among the 12 comparative studies, the lowest mean STSS score reported was 25.0 ( $SD = 17.73$ ); this was in a study of 782 Italian emergency rescue workers.

As noted above, the highest STSS total score among the 38 post-bushfire responses was 42 (out of a possible 85). The highest scores reported for the four comparative studies which published the maximum scores of their participants (see Table 6) ranged from 63 to 74 (out of a possible 85).

Bride (2007) proposed the following severity categories of STSS scores based on data from 282 US Social Workers:

- At or below the 50<sup>th</sup> percentile: < 28 - little or no STS
- At the 51<sup>st</sup> to the 75<sup>th</sup> percentile: 28 to 37 – mild STS
- At the 76<sup>th</sup> to the 90<sup>th</sup> percentile: 38 to 43 – moderate STS
- At the 91<sup>st</sup> to 95<sup>th</sup> percentile: 44 to 48 – high STS
- Above the 95<sup>th</sup> percentile: > 49 – severe STS.

In two other comparative studies (Table 6) which reported 90<sup>th</sup> percentile values (high to severe scores) these STSS 90<sup>th</sup> percentile scores were: 48 (for 225 US drug and alcohol counsellors) and 53 (for 118 US juvenile justice workers). For the post-bushfire researchers, the 90<sup>th</sup> percentile score was 35, and the 95<sup>th</sup> percentile score was 39.

Clearly, the levels of secondary stress reported by the post-bushfire researchers, as measured by their total STSS scores, were appreciably lower overall than those reported by trauma workers in the 12 comparative studies. Three of the 33 post-bushfire researchers’ STSS scores (9%) were in Bride’s (2007) “moderate” range and all were below levels which could be regarded as being clinically significant: “high” to “severe”.

**Table 6: Secondary Traumatic Stress Scale total scores<sup>a</sup>: Comparative normative data**

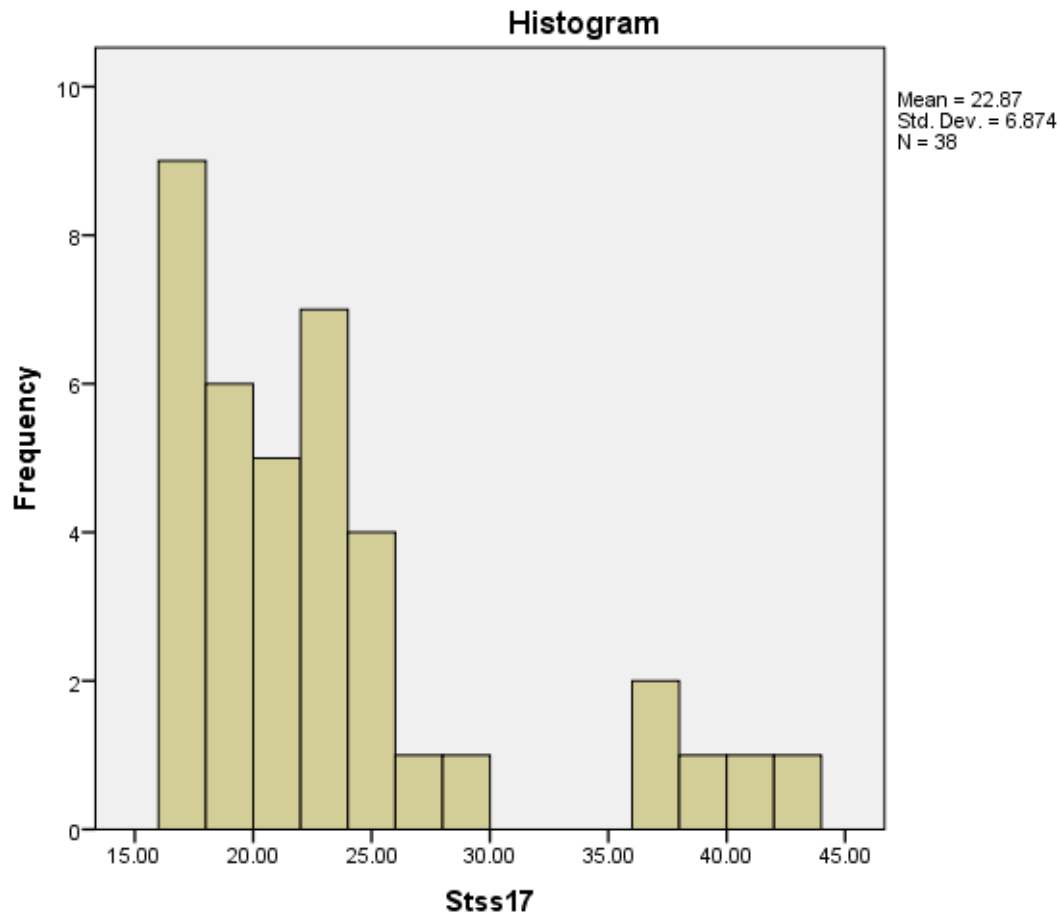
Participants & Study	N	Mean	SD	25 <sup>th</sup> percentile	50 <sup>th</sup> percentile	75 <sup>th</sup> percentile	90 <sup>th</sup> percentile	95 <sup>th</sup> percentile	Observed maximum
<b><i>Post-bushfire field research interviewers<sup>c</sup></i></b>	<b>38<sup>b</sup></b>	<b>22.9</b>	<b>6.87</b>	<b>17</b>	<b>20</b>	<b>24</b>	<b>35</b>	<b>39</b>	<b>42</b>
US social workers; Bride (2007, p. 68)	282	28.7	10.74	21	27	37	44	48	74
US juvenile-justice workers; Hatcher <i>et al.</i> (2011, p. 7)	118	37.7	10.74	30	38	44	53	58	63
US drug & alcohol counsellors; Bride <i>et al.</i> (2009, p.103)	225	31.2	12.30	22	28	38	48	57	63
Italian emergency rescue workers-- ambulance, fire, police, rescue services; Argentero & Setti (2010, pp. 11-13)	782	25.0	17.73	--	--	--	--	--	--
Indian humanitarian aid workers; Shah <i>et al.</i> (2007, p. 65)	71	41.4	7.10						
US child-abuse forensic interviewers; Perron & Hiltz (2006, p. 9)	58	34.2	10.64	--	--	--	--	--	--
US internet-pornography investigators; Perez <i>et al.</i> (2010, p. 12)	28	36.2	18.06	--	--	--	--	--	--
US emergency department nurses; Dominguez-Gomez & Rutledge (2009, p. 202)	67	37.4	11.00	--	--	--	--	--	74
US pediatric nurses; Meadows <i>et al.</i> (2009-2010, p.120)	23	34.2	9.98	--	--	--	--	--	--
US pediatric physicians; Meadows <i>et al.</i> (2009-2010, p.120)	21	30.1	12.01	--	--	--	--	--	--
US pediatric care workers; Meadows <i>et al.</i> (2009-2010, p.120)	87	31.2	9.51	--	--	--	--	--	--
US pediatric care chaplains; Meadows <i>et al.</i> (2009-2010, p.120)	22	33.1	7.63	--	--	--	--	--	--
<b><i>Unweighted mean and SD of the 12 comparative studies<sup>d</sup></i></b>		<b>33.3</b>	<b>11.86</b>						

<sup>a</sup> Bride *et al.* (2004), 17 items, each scored on a 1 – 5 scale. A score of 17 = no symptoms reported; maximum score = 85

<sup>b</sup> The 38 responses were provided by 33 interviewers.

<sup>c</sup> The present study.

<sup>d</sup> Effect size (Cohen's *d*) for the difference between the BNHCRC study mean and the unweighted mean of the 12 comparative studies = 1.07 (*r* = .473)



**Figure 2: Researchers' total scores for the 17-items of the 20-item Secondary Stress Scale (SSS) which were taken from Bride et al.'s (2004) Secondary Traumatic Stress Scale (STSS) (N = 38)**





### 3.9 RESEARCHERS' ACCOUNTS OF THEIR EXPERIENCES AND THEIR TRAINING AND PREPARATION.

Table 7 contains the written or transcribed verbal accounts provided by the post-bushfire researchers concerning their experiences and their preparation and training. Some of the text was edited to preserve anonymity, remove irrelevant material, or improve clarity of expression.

#### 3.9.1 Comments on interviews

There were 21 responses about experiences during interviews, from 19 researchers—one researcher provided three responses, one for each of three deployments. Nine responses (from seven researchers) described specific interviews and referred to the highly emotional nature of the encounters, which involved any or all of the resident's sadness, loss, grief, fear, and descriptions of serious threat to life.

The lady I interviewed had lost her husband in the fire. She had evacuated with her horses and son (I can't quite remember all the details but I'm pretty sure they had a young child) and the husband had stayed to defend and get everything else ready before leaving. Unfortunately the husband had become overcome by smoke and was found deceased in the burnt out family home. This is one of the hardest interviews I have ever done....Although I didn't cry during the process and the interviewee did not become distressed at any point, it was still an extremely emotional process. (2009 Victorian bushfires, researcher #008)

Seven responses referred to the interviewing experience in general: a pervasive awareness of interviewees' sadness and loss, and the cumulative emotional burden over the course of the deployment. The other five researchers described: difficulties in using an electronic data entry device without adequate preparation; the challenge of interviewing residents with dementia; feeling angry with an unreasonable resident; a new appreciation of the difficulties faced by those with responsibilities for third parties during a bushfire emergency; and anger at being quizzed at work repeatedly by colleagues about the interviews.

#### 3.9.2 Comments on training and preparation

There were 24 responses from 21 researchers about training and preparation for the task (three researchers each provided two comments about different aspects of training and preparation). Nine were positive endorsements of what had been provided.

We were provided with pretty good psychological preparation prior to deployment around dealing with any negative consequences and emotions and where to get help if it was needed. I really don't think you can do more than that. (2009 Victorian bushfires, researcher #008)

Six were statements about the need for de-briefing at the end of the day or at the end of the deployment—all these came from researchers involved in deployments where most of those involved lived locally rather than all staying together in a motel during the deployment. Two concerned the 2009 Victorian Black Saturday deployment and were to the effect that the organisers did the best they could but nobody could really be prepared for what faced the task force members. Two commented on how much there was to learn before going into the field and expressed a wish for more written information. One expressed a wish to have been better prepared to manage the strong emotions involved in some of the interviews. One was positive but wished there had been the opportunity to practice before going into the field. One researcher commented very positively about the personal de-briefing opportunities when all



the researchers were accommodated together and shared an evening meal. One researcher stated that the preparation was not adequate for what the interviews involved.

### 3.9.3 Overall impacts on researchers

There were 34 responses, from 32 researchers, about their post-bushfire interview experiences overall and the effects on the researchers. Twenty one of these (all from different researchers) were unequivocal endorsements of the positive nature of the overall experience. These could best be summarised as variants of “Some things were not pleasant at the time, but I learned a lot and I believe I am a better person for having done the interviews”.

I would say that my experiences were largely positive. I clearly heard many disturbing stories told by people who very narrowly escaped death, but I don't think that the reception of this information is necessarily bad for all people. I suspect it depends largely on what you bring to the table – i.e. your own emotional makeup and state. There may be a critical point, below which interviewers can deal with and assimilate the stories into their sense of the world with positive outcomes, and above which they cause negative emotional distress. I might be wrong. My own personal experience was positive – it made me reassess the value of life as well as providing me with great professional knowledge of bushfire, and positive self-worth in contributing to the solution of a national problem. (2013 Tasmanian bushfire, researcher #024)

Overall, these accounts resembled those described in some previous studies of individuals' “adversarial growth” following personally challenging experiences. Adversarial growth was described by Linley and Joseph (2004) as positive changes reported by individuals as a result of struggling with adversity, encompassing “...perceived benefits, thriving, blessings, positive by-products, positive adjustment, and positive adaptation” (p. 11). See also: Joseph and Linley (2006), Tedeschi and Calhoun (1995), and Zoellner and Maercker (2006). Eight different researchers described mixed responses: on balance it was a rewarding and worthwhile experience, but there were some distressing aspects. The remaining five responses are probably best described as ‘neutral’: the interviews were difficult but they had to be done—three of these were from the same researcher concerning three deployments.

The cumulative emotional burden of interviews that simply had to be done. - I'd previously been doing interviews in \_\_\_\_\_. This was the third set of interviews I'd been involved in since 2009. Plus there was a concerning family member health issue, all of which contributed to a weariness. I was relieved when the task was done. (January 2013 NSW bushfires, researcher #301)

Ten of the 32 researchers described a change, or changes, in the researcher's self-view or belief system.

Lasting effects? Probably more philosophical than anything negative—things like the fragility and randomness of existence, the importance of realistic planning, the inability of human beings to imagine catastrophe, the resilience and goodness of so many people in adversity. The experience was inspiring as well as distressing. (2009 Victorian bushfires, researcher #014)

In their review of literature concerning personal growth following adversity, Joseph and Linley (2006) concluded that three broad dimensions of personal growth following adversity have been identified and discussed: (a) relationships are enhanced; family and friends are valued more,



and individuals report increased compassion for others; (b) people change their view of themselves; they have a greater sense of personal resilience, wisdom and strength, perhaps with a greater acceptance of their weaknesses and vulnerabilities; and (c) changes in life philosophy and world-view; changes in priorities. Some elements of these can be discerned in several of the comments by researchers about the positive impacts of their interview experiences in Table 7—see the comments from participants: 05, 07, 14, 21, 23, 24, 26, 27 and 31, these eight researchers all reported STS scores in the “mild” range. **In none of the responses did a researcher indicate suffering psychological damage or harm.**

## 4. DISCUSSION

### 4.1 SUMMARY

Of 65 researchers who conducted post-bushfire interviews in five studies over the period 2009 to 2014, 33 participated in a follow-up study of their field interviewing experiences, a response rate of 51%. The 33 researchers provided 38 responses (one researcher provided three responses corresponding to three post-bushfire deployments; three researchers each provided two responses, corresponding to their two post-bushfire deployments). Twenty of the 38 responses (53%) identified one or more interviews as being emotionally stressful. These 20 responses were from 18 researchers—one researcher described three stressful interviews, one from each of three deployments. The major source of stress was the distress of the interviewees. The majority of the 20 responses described adaptive ways of managing the stress: most by talking with a trusted other, some by engaging in physical activity. A smaller number responded perhaps less adaptively—by social withdrawal or by drinking more alcohol than usual.

On a 20-item self-report measure of secondary stress symptoms, 76% of the 38 responses reported one or more symptoms. Four researchers (12% of the 33 researchers) reported total secondary stress symptoms scores that were relatively higher than those of the other 29. On a 17-item version of the measure which enabled comparison of post-bushfire researchers’ total stress symptoms scores with those reported in other, comparative, studies of trauma workers, the symptoms scores of the researchers were generally much lower than those of the trauma workers. The secondary stress symptoms score levels reported by the post-bushfire researchers were all below what could be regarded as clinically significant levels.

Of 34 responses from 32 researchers describing the overall effects of their post-bushfire interviewing experiences 21 (66%)—all from different researchers—described positive outcomes in terms of understanding and personal growth. These accounts resembled what other researchers have proposed to be outcomes from adversarial growth following personally challenging experiences. None of the responses reported psychological harm resulting from post-bushfire interviewing experiences.

Of 21 responses from 19 researchers about the adequacy of their training and preparation for post-bushfire interviewing, there were: (a) few negative appraisals; (b) some specific suggestions for improvements (such as practicing before deployment; presenting techniques for managing interviewees’ strong emotions; and providing more written information); and (c) several strongly-expressed recommendations for debriefings to be held at the end of each day and at the end of a deployment.

Perhaps not surprisingly (in light of the number of fatalities and the high levels of house losses—Table 2), the reports from the nine researchers who conducted interviews following the 2009 Victorian ‘Black Saturday’ bushfires indicated that most had been relatively more affected



emotionally by their interviews, compared with responses from researchers who conducted interviews following the other bushfire events.

## 4.2 LIMITATIONS

As is the case for most retrospective, self-report, descriptive studies, limitations should be noted. The response rate of 51% is comparable with those reported for previous surveys of trauma workers: Bride's (2013) review of 15 studies reported response rates ranging from 25% to 76%, and the unweighted mean is 46%. However, almost half of the post-bushfire researchers did not participate and thus caution should be exercised in generalising the findings. While it may be the case that non-responders experienced higher levels of stress than responders that seems unlikely: the highest response rate across the five deployments was from the researchers who conducted interviews following the multi-fatality 2009 Victorian Black Saturday bushfires (Table 2).

While researchers from four of the post-bushfire studies were followed-up within two or three months of their deployment, researchers from the 2009 Victorian bushfires were surveyed five years after the event. It is not known what the effect of the five year interval on the nature of their recollections might have been. The high response rate among this group of researchers (75%) and the detailed responses of most suggests that their post-bushfire interview experiences were very impactful. However, the difference in time from the post-bushfire interviews to data collection between the Black Saturday researchers and the researchers from the other four deployments should be kept in mind when comparing the responses of the two groups.

## 4.3 GENERAL DISCUSSION

The aim of the present study was to investigate (a) the nature of any stress-related experiences of the post-bushfire research interviewers; and (b) how well prepared they believed they had been for their work. In relation to the first aim, of the 33 researchers who participated, more than one quarter (9, 27%) reported **no** distressing experiences—neither as symptom reports, nor as comments on their overall interviewing experiences. Three researchers (9%) reported 'moderate' levels of stress symptoms while the remaining 21 (64%) reported 'mild' levels of symptoms (on the basis of Bride's, 2007, STSS score criteria). In relation to the second aim, it is tempting to conclude that the finding of nil to mild levels of stress among most participants indicates the overall effectiveness of the training and preparation of the researchers. However, the lack of a control or comparison group means that the most which can be claimed is that there was little indication that the training and preparation were inadequate. The high level of education of the researchers may have contributed to the relatively low levels of stress symptoms reported (Bisson, 2007). In addition, all the researchers had prior interviewing experience and most had either experience in conducting interviews about sensitive issues, or training and experience in counselling. Further, the role of the researchers was not to try to alleviate distress, but to obtain good-quality information relating to community bushfire safety—unlike those surveyed in most previous STS research. However, the main reason for the low overall levels of stress symptoms is probably that the bushfire-related events described in many interviews were not particularly stressful. If all the bushfire events had been as disastrous as the multi-fatality 2009 Victorian 'Black Saturday' bushfires (Table 2) then overall levels of reported secondary stress would probably have been higher.

Future deployments should incorporate detailed and specific evaluation of all aspects of the training and preparation. On the basis of participants' reports, it appears that provision of opportunities for end-of-day and end-of-deployment de-briefing is very important and needs to



be implemented in all future post-disaster field interview research deployments. However, given the inconsistent—and some negative—findings about the effectiveness of formal approaches to psychological debriefing following potentially traumatising events (Devilley, Gist, & Cotton, 2006), the emphasis should probably be on providing opportunities for informal sharing of experiences rather than imposing formal, structured de-briefing activities.

Failure to find associations between reported secondary stress levels and researcher demographic characteristics is consistent with findings from previous studies of secondary, or vicarious, stress in trauma workers (Bride, 2013; Baird & Kracen, 2013; Dunkley & Whelan, 2013). The indication that higher levels of secondary stress were reported by those researchers who conducted interviews following the 2009 Victorian bushfires—which fires resulted in 173 deaths and destruction of more than 2,000 homes—is consistent with findings from PTSD and disaster research (Alexander & Klein, 2009; Nemeroff, *et al.*, 2006; Neria *et al.*, 2007).

We were somewhat surprised that such a high percentage of researchers (21/33; 64%) described positive personal outcomes from their interviewing experiences—often as involving growth. However, reports of positive outcomes by some involved in disaster responses have been noted in the past, though not often given prominence (Alexander & Klein, 2009). The nature of positive outcomes for researchers seems to be a fruitful topic to investigate in more detail if subsequent post-disaster researcher studies are conducted. It may also be useful to encourage sharing and discussion of positive outcomes during the course of future post-disaster researchers' de-briefing discussions.

By way of concluding this general discussion, informal reports to the first author suggest that listening to recordings, transcribing, and reading, coding and analysing transcripts of interviews with survivors of disasters can be distressing. There is some limited research from the qualitative research field which confirms this possibility (see Woodby *et al.*, 2011). We did not examine this issue in the current study. However, it seems important to explore in future research.



## 5. CONCLUSIONS

1. Interviewing residents affected by a disaster event will be psychologically impactful for many who conduct post-disaster field research, especially when the event resulted in multiple fatalities. For the majority, the experience will probably have some distressing and stressful elements but will be viewed positively overall. A small percentage will probably experience moderate levels of distress, but the distress is likely to be relatively transient. The risk of long-term psychological harm is likely to be quite low provided researchers are adequately trained and prepared for what they will face in the disaster area.
2. The levels of stress experienced overall by post-disaster research interviewers is likely to rise with the number of fatalities and the magnitude of property and infrastructure destruction associated with the disaster. This must be taken into consideration by research managers and chief investigators in planning for training and support of their field researchers.
3. In future deployments, attention must be given to the apparent importance of integrating debriefing and discussion opportunities into the daily schedules of researcher activities, especially in circumstances where the researchers will not all be accommodated together after the day's interviewing.
4. Following future deployments, all aspects of the training and preparation provided to the researchers need to be evaluated so as to ensure ongoing effectiveness.
5. Following future deployments, research interviewers should be followed-up after an appropriate interval to monitor the levels of stress experienced by the researchers. The secondary stress scale (SSS) measure used in the present study may be useful for this purpose since comparative data from 2009 – 2014 will be available.



**Table 7: Researchers' accounts of: distressing interviews, their training and preparation, their experiences overall and lasting impacts**

Participant	Summary of the negative interview(s)	Could training/preparation have been improved?	Overall comments
	<b>Fire: Victoria, 07/02/2009, 'Black Saturday'</b>		
01 <sup>a</sup>	<p>I interviewed a middle-aged man beside the ruins of the family home in _____. His hands were trembling visibly, he smoked continuously. He described making last minute preparations for defence with several family members when the fire swept around the base of Mt _____. He and a nephew took shelter in the house. The house began to burn. They remained inside until the roof began to collapse. They crawled out the front door, downhill, in an ember storm which was blinding. They bumped into a small concrete water tank, then crawled round to what approximated the lee side. The wind was changing direction and they were being impacted by embers. They believed they would die and said goodbye to each other. A piece of roof iron blew off the burning structure and wrapped itself around the tank. The hot metal burned the man's left arm severely (it was still bandaged). But it sheltered them from the embers. There was a small amount of water in the notionally dry water tank. It resulted in a puddle. They soaked their shirts in this and put these over their heads and were able to breath despite the embers, smoke and heated air. After about an hour they were able to leave their place of shelter. They looked down the hill and saw the burned-out car that other family members had been in. They believed that all four had died and their bodies were in the car. As they made their way down the</p>	<p>Not really. None of us, not even experienced firefighters, knew what it was going to be like.</p>	<p>I was not really prepared for suddenly being in the midst of the almost total destruction; with the smells of dead animals, cracked septic tanks, rotting food in refrigerators and freezers in burned houses; heat, fine grit in the eyes at the slightest puff of wind; totally blackened and bare landscapes; interviewing people who had lost home, neighbours, family members, animals; surrounded by Coroner's Office tapes around properties where bodies had been located and removed by police. Lasting effects?- Left me with a profound sense of the insignificance of individuals, including myself, the unpredictability of life-changing events, and the fragility and transience of life.</p>



	dirt track to the car, they heard a shout and saw all four emerging from a farm dam further down the hill where they had taken shelter and survived. Other neighbours were not so lucky. He pointed out the heat spalling on the concrete water tank, the big piece of roofing iron that saved their lives, the mud puddle beside the tank, and his nephew's scorched T-shirt that had been left hanging on the remains of a fence.		
03	No single interview. There was cumulative fatigue from the combined interviewing experiences over several days.	OK	Personal growth as an interviewer; and deeper understanding of how bushfires affect communities.
008	The lady I interviewed had lost her husband in the fire. She had evacuated with her horses and son (I can't quite remember all the details but I'm pretty sure they had a young child) and the husband had stayed to defend and get everything else ready before leaving. Unfortunately the husband had become overcome by smoke and was found deceased in the burnt out family home. This is one of the hardest interviews I have ever done. It was my first four days of deployment and only about seven days or so since the fires. I had to make sure the process didn't pass on any feelings of guilt about their level of preparedness or actions. However, at the same time I wanted to ensure that the interviewee felt that the information she provided would be useful and would reduce future losses. I asked one of the senior NSW F&R personnel who was in my team to sit in on the interview and I think it helped having another person present. Although I didn't cry during the process and the interviewee did not become distressed at any point, it was still an extremely	We were provided with pretty good psychological preparation prior to deployment around dealing with any negative consequences and emotions and where to get help if it was needed. I really don't think you can do more than that. Although, perhaps a follow up session in small groups a month or so after deployment would have been beneficial - to allow everyone to debrief together, ensure everyone was travelling well and to remind us about what to do or where to go for help if needed.	There have certainly been lasting impacts, however these are positive. I learnt a lot about the interview process in a post disaster situation. I am also now a more confident interviewer and know that I can cope well in challenging situations.



	emotional process. However, given the circumstances I think it went very well. The interviewee said she was pleased to pass on the information and hoped it would be useful. I think it was an important debrief for her.		
009	So many interviews. The sense that their whole world had changed, and the desolation and loss of hope they experienced. The randomness of the losses, and the small differences between living and dying.	In hindsight, more preparation for what we going to face would have been useful. But no one knew at that early stage. I didn't realise the effect the interviews were having, and probably it was the same for everyone. It was overwhelming.	I found that the ongoing Royal Commission hearings streaming online, and daily media coverage, continued to bring up stories like the ones in my interviews, and that meant that the reactions I had seemed last for longer than they otherwise might have. I didn't realise I was reacting in this way at the time, only in hindsight. Long term: only positive impacts. It was a privilege to hear the stories of people. Although it was distressing, I still found it a positive experience overall. I am proud to have been part of this research, and I'm glad someone is looking now at how the researchers reacted.
010	A householder who blamed everyone else for what happened on Black Saturday and accepted no responsibility for any of his own choices. He bragged about circumventing the new building codes in his plans to rebuild, which seemed so senseless given what they'd all just experienced. Made me angry	I can't think of anything that could have been done to prepare us more.	One of the most important self-management experiences for me was going on a subsequent (post-bushfire interviews) deployment with another social researcher. In hindsight, I realise that we both debriefed each other on that (Black Saturday) deployment and I felt quite positive having shared and compared experiences. It gave me a different insight into emergency management and I am less inclined to focus on the drama of the firefight and more inclined to look at the big picture and the impact on communities.
011	No single interview stands out.		No doubt the scale of events had an impact. But it is hard to separate out the interviews from ongoing involvement in the bushfire inquiry.
012	No one interview comes to mind. I did find that I got quite stressed because we (colleagues) were	I think the post-interview de-brief sessions were very helpful. For the _____ interviews, we stayed in	Lasting effects? Only in a positive sense. I feel I have a better understanding of what survivors are



	<p>talking about the interviews all the time. People always wanted to talk about it, and I found myself getting really stressed and annoyed. So I'd just shut the conversation down. I didn't think much about it at the time, but on reflection this was probably the main issue for me. It was a very busy six weeks or so and it just seemed to take over everything.</p>	<p>_____. That meant we had evening meals together, which provided an opportunity to discuss the day's interviewing. For future post-bushfire research I would recommend that the researchers all stay in the same location—even if they lived nearby.</p>	<p>feeling, which has been useful for my other research. Personally, the interviewing experience has given me a better sense of perspective about my own life and problems.</p>
013	None	Nothing to suggest.	The experience gave me a better understanding of the experiences of persons impacted by serious bushfire. I really value the opportunity to have enabled the interviewees to tell their story.
014	<p>The most impactful for me was a young man (18-20?) who had evacuated _____ with his grandparents, who suffered a harrowing experience driving through burning cars. They decided to turn right to drive into _____. If they had turned left they now know they would all be dead. It struck me that he had barely survived and that his survival was based purely on chance rather than on good decision making. It struck me that this young man could just as easily have ended up dead and unable to report his experiences. Both of us were teary-eyed as we talked, as he seemed to be just as aware of the randomness of his survival as I was</p>	<p>I think those of us with psych backgrounds had reasonable expectations of what might be involved in the interviews.</p>	<p>Lasting effects? Probably more philosophical than anything negative—things like the fragility and randomness of existence, the importance of realistic planning, the inability of human beings to imagine catastrophe, the resilience and goodness of so many people in adversity. The experience was inspiring as well as distressing.</p>
	<b>Fire: Tasmania, 05/01/2013</b>		
018	<p>Not any of the interviews themselves. The fact that software on the iPads didn't match the interview questions and you couldn't read the iPads in bright light. Made us appear disorganised—not the sort on impression you want to convey to people after a disaster</p>	<p>Practice interviews would have been great. An end-of-day get together to talk about our experiences would be good in future.</p>	<p>The interviewing did not affect me beyond what would be expected in the situation.</p>



019	The couple was discussing their reasons for not having insurance. They couldn't afford it and this influenced their decision to stay. One said they would have preferred to die rather than be left with nothing. They spoke of their fear of being trapped during the fire and that they really only survived because of luck, because they weren't able to actively defend the home because of their age, it just survived. I had not had any experience of interviewing people about really emotionally charged events, so I hadn't coping mechanisms to help me separate myself from peoples' emotions and feelings.	I appreciated the work that went into training us to do the interviews. One suggestion is to be given ways to handle emotionally charged situations	I still think about that couple and wonder how the husband is doing. It still makes me uneasy thinking about it. But I also think I helped other people by giving them the chance to tell their story so lessons can be learned for future fires. For that reason I would do post-bushfire interviews again and feel as though I would be better prepared to do so. Prior to the interviews we were told that we would work three days, then have a day off. I hadn't really thought about it until the leader insisted we took a day off. Before, I thought that I couldn't ask for a day off as I might come across as weak. I think it was really important that we were made to have that day off whether you feel you need it or not.
021	The extreme lengths that one woman went to in order to save her horses; defiance of instructions to leave on multiple occasions, staying despite dispatching husband child and car load of belongings, risk to fire service / police personnel as they repeatedly went up her track to get her to leave. Then the grief, destitution and anguish of losing all but each other; the pathos and uncertainty of homelessness		I am still concerned about the plight of those who were dispossessed and displaced as a result of the fires; especially older people who had experienced a major loss to their way of life and community. I want to do more research in the area, understand the recovery process, infrastructure, influence preparedness.
023		No, given the short time frame we were very adequately prepared.	It reinforced my admiration for people's resilience and capacity to cope. I only saw them the week after the fire, and they could well have fallen in a heap a month down the track, but I thought in the immediate, I thought left me impressed with the ability to cope, at least in the immediate. They're strong people there in _____, remarkable people. Lasting effects? For me, extremely positive and growing experience, apart from the fact that it was fascinating and educational, both as someone



			living in fire-prone area and someone whose professional interest is social science.
024		We really never had a real debriefing session. This is something that is definitely needed in deployments like these. We would naturally talk to our fellow researchers but it would have been good to have a full group debrief. This may have been difficult because different people came and left the program at different times.	I would say that the lasting impact was positive not negative. I think it is good to sometimes be exposed to the realities of life and the way in which we are not perfectly in control of the things that happen to us. It is sobering to occasionally realize how close our own mortality is and positive (if correctly dealt with) in that it allows us to see the value in our lives and how lucky we are. While the questionnaire is obviously looking at the negative impact of bushfire interviewing, I would say that my experiences were largely positive. I clearly heard many disturbing stories told by people who very narrowly escaped death, but I don't think that the reception of this information is necessarily bad for all people. I suspect it depends largely on what you bring to the table – i.e. your own emotional makeup and state. There may be a critical point, below which interviewers can deal with and assimilate the stories into their sense of the world with positive outcomes, and above which they cause negative emotional distress. I might be wrong. My own personal experience was positive – it made me reassess the value of life as well as providing me with great professional knowledge of bushfire, and positive self-worth in contributing to the solution of a national problem.
025		It is important that a collaborative approach is taken with research teams. Ideally I think a fire agency representative and a researcher would be a good combination	
026	No one interview. Overall, the interviews raised feelings of sadness at the impacts on households,		Made me think of my own circumstances, increased awareness of my own vulnerability to





	the community, the loss of bushland and especially the loss of animals and wildlife.		bushfire. Being part of a team is vitally important and pairings helped. I would never do it on my own.
027			Alerted me to the hard events some people are faced with, strengthened my empathy for others in difficult circumstances.
028			I will be more inclined to take immediate action in emergencies. I have revised our home plan to ensure I can leave early with the children and have ensured I am well-insured. The mandated break after three days was very helpful.
030			Only that it was an amazing experience to be involved in and have the opportunity and privilege of hearing these people's stories. I have no lasting negative impacts as I didn't personally interview anyone with a truly horrific story, the ones I did left me with more of an appreciation of how people plan for and react in a disaster situation, and a deeper understanding of the massive risks of bushfires.
031			I have thought back on my experiences on that day several times since and the emotional effect upon me has been more positive than negative. To hear first hand from people in their communities of their stories of coping, decision making at times of strife, stories of almost unbelievable good fortune, of how communities supported each other following disaster and how things may have been able to be planned or done differently in the same situation was inspirational for me. Although this work for me was unpaid, I gained more from the experience from a personal point of view than anything else that I could have gained from volunteering to do



032	No single interview		Now that I am recalling the interviews I feel sad and a little teary.
034			I think it's really important that people are comfortable with their interview partner. The team needs to provide an opportunity for researchers to swap partners in an emotionally neutral way in the first few days if they so wish. My experience was very positive mainly because I had an excellent working relationship with my interview partner
201 <sup>a</sup>	She described how she and her husband and two children had believed that they were prepared, and planned to leave and drive to the town centre if ever threatened. However, they were taken by surprise, abandoned their car (which was undamaged!) and sheltered in _____, chest deep in cold water for several hours supporting the two children, sheltering from radiant heat behind a moored boat. The windward side of the fiberglass hull was charred and melted. Their house had survived undamaged.		Confirmed my long-held view of the world as random. Personal circumstances, plus memories of a previous deployment, plus frustration at how some things were being organised—and being unable to have these changed, made me glad when it finished.
04			I was not interviewing near the fire source, where people were less affected. Those who were directly threatened had coped well materially and/or emotionally. Those whose properties were swept by the fire had successfully protected stock, buildings and equipment. I characterise the rural community I found as strong in preparedness and resourcefulness
15	No single interview. Just a general feeling of sadness.	NO I was quite happy with the level of preparation I received. There were of course ongoing issues with the iPad and interview question sheet which had to be managed. I think it would have been useful for the researchers to gather together in the evening for a more formal debriefing to see if anyone wants to	The first day I arrived was interesting. Upon arrival a research interviewer got out of the car and said "Mmmm, someone's cooking a bar-b-q". I said, "that's not a bar-b-q, that's the smell of burnt houses." Perhaps people need to be a little better informed and prepared for what they will see,



		<p>share any particular experiences they had during the day. That would be a good time to pick up how the interviewers are managing and if any need some follow-up counselling or assistance. It was difficult in that we were all staying at different locations, so once we left _____ we didn't see each other again until the next morning. Nevertheless, it still worked OK for me as I 'debriefed myself' by writing up daily notes about what I had observed and heard.</p>	<p>smell and hear. Also, some people seem to be more suited to this work than others, and in the different roles (ie: interviewer and note-taker). One researcher I worked with early on for a couple of days (not the same one as in the above example) did a few interviews with me at _____. I can't recall if we'd done two or three interviews that day, but in the early afternoon said to me "I can't do this any more. I need to go home." Such was her state of shock and distress at what she was seeing and hearing from the interviewees. We went back to _____. By the end of the week I had paired up with a very good researcher. She preferred to do the note-taking and was very good at it, occasionally prompting if I'd forgotten to ask something. Conversely, I preferred interviewing, and very quickly knew what questions to ask and could cut through to the point. I did have some experience where a co-worker wanted to 'have a go' at interviewing and was not at all good at it. The same occurred with some initial introductions where my co-interviewer was very brash and presumptuous, which caused problems in settling down the interviewees. Finding a good co-interviewer and being able to stick with that person to form a good team is very important.</p>
	<b>Fire: NSW, 13/01/2013</b>		
002	<p>One interview in particular - weren't really prepared for: Elderly couple, became evident they had dementia - they wanted to talk, but became disorientated.- wasn't until daughter came home and helped – so couldn't leave and couldn't do the interview</p>		<p>Thinking back to that interview. - need an exit strategy for these types of situations that are unexpected. Lasting effects? Not in a negative way, but in being more prepared myself for bushfires.</p>



203		Now, in retrospect, I would say, the preparation would not prepare me for how it's going to be like approaching these residents	. Overall, doing the interviews resulted in personal growth
204		The offer was there for debriefing, and we were paired with a fire service person, so it was collaborative.	
005	Feel that working in area where hadn't been any deaths occurring – I think that was fortunate. I think it that could be quite tricky to work in areas where either a number of deaths or a death or something from the fire. – would have significant repercussions on people you were interviewing so that could weigh heavily, or be just an extra challenge for researchers. When people talk about losing material things they are moved and incredibly upset and that can be challenging - number of times I switched off the interview because people were emotional and that was appropriate, and they got themselves together and I'd give them the opportunity if they wanted to start again, and proceed ... so I can imagine it would be that much more difficult... would probably not want to interview anyone... or it would be hard obviously to interview someone who was directly affected by a death.	It was a rushed process but had some information before we got up there and the first afternoon/evening we were extensively briefed about the community and the fire and the interview process. Sometimes too much information before, doesn't actually assist or make sense until you get there and are fully immerse. Having previous experience was critical – relied on this – they were recruiting people with qualitative experience	When you listen to people's stories you learn and feel 'what would you do?' in those sorts of situations yourself. Like engaging with anyone in any conversation – not lasting effect <i>or a negative effect</i> - but might guide you in some way. Positive experience all round and people want to share and they see the value of talking about their own... unpacking their experience and shelving some of the stress or trauma they may have gone through. I know that's not the role we play, it's certainly not the intent of it – but that's just a by-product.
007	These were my first deployments for interviewing bushfire affected residents. In one interview it was	On a first deployment there is just so much to take in as far as orientation of a new, unfamiliar area goes,	They have certainly increased my personal knowledge about bushfires and have also provided



	<p>simply a matter of the interviewee scoffing and ridiculing a neighbour for leaving early. He was closer to the fire front than the neighbour and certainly had an air of superiority about him which I found distasteful (and I hadn't considered that I might be confronted by this kind of attitude – so I was a little taken aback).</p> <p>The second was at a campground which had been solidly booked with families (a number of whom were returning families that had children with disabilities). The sheer magnitude of what the managers had to deal with on the day of the fire was mind-boggling. This interview taught me a lot about the complexities (and scale) that some people have to manage unexpectedly in such emergencies.</p>	<p>then learning about the logistics of the fire etc. On top of that comes the actual interviews and their content. I think that providing fire maps and anything that assists in having background information about the fire and the area before the deployments will assist in reducing the cognitive load for newcomers, allowing them to then concentrate more on the actual interviews when it's most needed. This is no so much a criticism, as a suggestion</p>	<p>me with insight into how people cope, or don't cope, under such pressured circumstances; what is important, and what is not important</p>
301 <sup>a</sup>	<p>The one which I found quite distressing was an elderly couple, and they'd lost the home. It had been in their family for seven generations – it was totally destroyed with all of the memorabilia – photographs of children and grandchildren – and they were just such nice people, trying to be helpful. They were never in any danger, but I suppose it was just the sheer, just the random unfairness of it - they had no expectation that they would lose the house</p>		<p>The cumulative emotional burden of interviews that simply had to be done. - I'd previously been doing interviews in _____. This was the third set of interviews I'd been involved in since 2009. Plus there was a concerning family member health issue, all of which contributed to a weariness. I was relieved when the task was done.</p>
	<b>Fire: NSW, October 2013</b>		
215	<p>I think that anyone could not help but experience sadness in talking with these people about what they had been through; indeed, I don't think it would be human to not experience such emotions. I think the sadness I felt for these people was in relation to the losses they experienced and knowing how much of a hard journey they had in</p>	<p>I was quite happy with the level of preparation I received, but that may not have been sufficient for some others new to bushfire disaster interviewing as they may well be quite unprepared for the level of emotions that may be displayed by interviewees, I think it would have been useful for the researchers to gather together in the evening (prior to going out</p>	<p>One cannot do this work without being at least a little emotionally affected, but not necessarily negatively..</p>



	front of them. I was also very concerned for the mental health state of a number of the people I interviewed given the traumatic experiences they had been through. The 'threat levels' that brought about a feeling of sadness (and empathy) for me were between 3-7, but especially for those at Level 6-7 who lost their homes.	to dinner together, which is a great idea too and helps with informal debriefing as we all tend to talk about what we did during the day) for a more formal debriefing to see if anyone wants to share any particular experiences they had during the day. That would be a good time to pick up how the interviewers are managing and if any need some follow-up counselling or assistance	
017			I downloaded the fire app and made a point of keeping an eye on forecasts for friends in fire prone areas. I really enjoyed it and felt an incredible sense of privilege hearing people's stories.
029	There were a number of interviews where the pain and distress or the interviewees had an emotional impact on me. This was more apparent in _____ with the pain and distress of people who actually lost or nearly lost their houses	No debrief was run.	There were several days there where I was quite numb. . Overall while emotionally difficult, I think the experience has improved my research in and my ability to interact with residents and managers who live or work in these areas.
055	I felt particularly sorry for one old lady who was on her own and out of communication, who was obviously still quite upset by the experience of a last-minute evacuation with flames licking at her back fence. I wished I could have said to her that it will all be easier if a fire happens again		Overall it was a positive experience because I became more connected to what people experience in these fires. Nobody was injured in the fire I surveyed and there was only minor property damage. I expect this would make quite a difference to the interviewer's experience compared to a fire with major impact.
	<b>Fire: WA, January 2014</b>		
033	Loss of pets and back studio of house which was distressing to the resident. The neighbours behind the resident's house did not keep their garden clean. Resident believed this is why studio burnt down- this caused her a lot of angst. Also the resident's home was the only one standing in the whole street the rest had been destroyed. This made the street feel very eerie and was distressing for the resident	Perhaps if we had more of a debrief afterwards to talk about our experiences of the interviews.	It increased my awareness of fire danger and also the measures you must take to prepare for it. It also made me realise how some of the people living in fire prone areas really do not prepare and plan enough/at all for the event of a fire. They also have a tendency to underestimate the danger of a fire- in particular the danger of staying and defending

<sup>a</sup> Responses from the same researcher





## NOTES

<sup>1</sup> Bahn (2012) and Bloor *et al.* (2010) also discussed risks to field researchers' physical safety. Newman, Risch and Kassam-Adams (2006) discussed ethical issues associated with conducting trauma-related research and proposed best-practice guidelines.

<sup>2</sup> See also Adams, Matto, and Harrington (2001), Baird and Kracek (2006), and Dunkley and Whelan (2006) for discussions of the concepts of vicarious traumatisation and secondary traumatic stress.

<sup>3</sup> Although beyond the scope of this report, there is considerable evidence that PTSD symptoms are associated with changes in brain functioning related to information processing (*e. g.*, Javanbakht, Liberzon, Amirsadri, Gjini, & Boutros, 2011).

<sup>4</sup> Bushfire Cooperative Research Centre, see: <http://www.bushfirecrc.com/>

<sup>5</sup> Bushfire & Natural Hazards Cooperative Research Centre, see <http://www.bnhcrc.com.au/>

<sup>6</sup> Searches were conducted using *Web of Science*, *PsychInfo*, and *Google Scholar*.

<sup>7</sup> Cohen's  $d = (33.3 - 22.9) / (\sqrt{(11.86^2 + 6.89^2 / 2)})$

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**Bushfire CRC Post Bushfire Interview Guide**  
**WA January 2014 Bushfires**

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Remember: This interview should be a conversation with the householder, not an interrogation; (i) much of what you want him/her to discuss will emerge without you having to ask a specific question; (ii) pay attention to his/her answers so you do not ask questions which have already been answered, or questions which are not applicable to this householder.

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1. For the record, what is the address of this property?
2. First, have you taken part in any interviews or surveys previously about the January 2014 bushfires?
3. Now, do you mind if we get some basic information. Who usually lives here, and who was here on the day of the fire?
  - (Note gender of the interviewees on checklist)
  - Year born?
  - Employment status?
  - Disabled members of the household?
  - Elderly or frail household members?
  - Pets? Poultry? Livestock?
4. How long have you lived at this address?
5. Is this your main residence?
6. Do you own, rent or manage the residence?
7. What insurance did you have for:
  - House?
  - Contents?
  - Vehicles?
  - Other?
8. Previous experience of bushfire?
9. Are you a current or previous member of a fire brigade?
  - Any other household members who are previous or current fire brigade members?
10. What sort of a community would you say you live in?
  - About how many people in your local community do you know?
  - Do you think most of your neighbours know you?
  - Do neighbours cooperate if there are issues or problems in the area—say with bush or grass building up?
  - Do you feel any sense of personal connection with your neighbours?
  - Do neighbours socialise with each other?
  - If you needed help, say with transport, could get this easily from your neighbours?
  - **INTERVIEWER: INVITE DFES PERSON TO ASK ABOUT ANY COMMUNITY BUSHFIRE SAFETY INITIATIVES.**
11. Over the last few years, how concerned have you been about the possibility of a bushfire threatening your home?
  - Did you think your home and your family would be at risk from bushfire?
  - Why or why not?
  - What did your neighbours think about bushfire risk?

12. What general bushfire safety information do you recall receiving in the 12 months prior to the January 2014 fire? (i.e. not related specifically to that fire)

- INTERVIEWER: INVITE DFES PERSON TO ASK ABOUT DFES MATERIAL.
- Media?
- Past fires?
- Neighbours?
- Other sources?

13. **Before the January fire**, did you have a bushfire plan?

**IF YES: What was your plan** prior to the January bushfire?

- Was it written down?
- Main reasons you decided on this plan?
- What was it based on? (DFES PERSON, ASK: Did you use any material from the DFES in making your plan?).
- Was your plan discussed among the occupants/family?
- Had you rehearsed or practiced your plan?
- Did you have a back-up plan?
- Were you responsible for dependents or pets or livestock?  
If yes, was provision made for them in the bushfire plan? If yes, what?

14. Before the January bushfire, What actions, if any, had you taken to protect your home and your family from bushfires?

15. In the 2 or 3 days before the fire, how concerned were you about the possibility of a bushfire actually threatening your home? (Did you talk to neighbours about this? Do you think that others living in this area had similar concerns about a possible bushfires?).

16. The fire threatened on a Sunday, Sunday 12 January. Can you think back to the day before the fire threatened (Saturday)? What fire danger weather predictions or warnings do you recall about the day the fire threatened? Did you do anything in particular to prepare for a possible bushfire in the next day or so?

17. On the day of the fire, walk me through what happened and why. INTERVIEWER: *use the following probes as needed to make sure you get a comprehensive narrative of this householder's experiences during the course of the day of the fire:*

- When and how did you first find out that there was a bushfire threat? INTERVIEWER: INVITE DFES PERSON TO ASK ABOUT INITIAL WARNINGS. SMS/LANDLINE ALERTS? PHONE TREES? SOCIAL MEDIA?
- Where were you at the time? (IF NOT AT HOME: Did you try to return? What happened?)
- Did you try to find out more information about the fire? How?
- What did you decide to do about the fire **initially**?
- Main reasons for your initial decision?
- What did you ultimately end up doing?
- Why did you decide to do that? IF the interviewee left, what was the TRIGGER TO LEAVE?
- How did it all work out?

18. CHECK: Impact of the fire: Loss/damage to property or possessions? Loss of pets, livestock?

19. Knowing what you know now about the fire, what if anything would you have wanted to do differently? (Thank resident, leave sources of help information sheet).

## **General Guide for Interviewers**

### **WA January 2014 Bushfires- BNHCRC/WA DFES Task Force**

#### **1. Purpose:**

The reason we are doing these interviews is to get good quality information from residents in the Mundaring area impacted by the January 2014 bushfires about their experiences so as to assist WA DFES staff in their post-2013/14 bushfires review of their community safety policies, priorities, procedures and practices. If we are not effective in getting this information we will have wasted a lot of peoples' time and tax payers' money. To this end:

- (a) Study the Interview Guide. When interviewing, it is important to cover all the topics listed, as far as possible in the order shown. This Guide has been approved by the La Trobe University Human Ethics Committee (Reference LTU UHEC 13 – 008).
- (b) Follow the interview guide and do not allow interviewees to wander off topic for an extended period.
- (c) Work with your WA DFES partner to facilitate (through your questioning) completion of the Interview Summary Checklist (ISC).
- (d) Following each interview, the ISC MUST be checked and completed as soon as possible by the team.  
--for both, see point #5 below.

#### **2. Safety:**

I understand that the environment is not regarded as hazardous—we will not have to wear PPE (hooray!!!). However, it is important to be vigilant and to behave prudently at all times: think of being in a workplace environment that may have unforeseen dangers. Be careful not to trespass on properties which prohibit entry. Playing the percentages, the most serious (though unlikely) danger is from falling trees or tree branches: in a treed area, always look up for broken, hanging branches. Fire damaged trees are often weakened at the base and dangerous for a distance equivalent to their height. If strong winds are predicted we will avoid treed areas. If you see anything that concerns you, alert Jim, or Jen, or Lauren. Be careful with personal hygiene, always use hand disinfectant/cleanser before eating or handling food. The weather may be hot. You may be in the sun for several hours each day – be sun smart and drink plenty of water.

#### **3. Apparel:**

We will be in areas affected by bushfire earlier in the year--in January. Please wear long-sleeved shirt and slacks (NOT shorts) that can survive getting dirty. Style: If in doubt, err on the side of dressing conservatively for the field—you will be 'at work'. Wear boots or sturdy shoes: NOT open-toed footwear of any kind. Take a shade hat, be prepared for heat, wet, and cold. [ I recommend having small: (i)sunscreen, (ii) insect repellent, (iii) lip cream, and (iv) hand cleanser dispensers you can carry with you. Consider a backpack or satchel.] You will be given a Bushfire CRC Researcher tabard (flouro vest) which you are to wear at all times while in the field. You should also wear your BNHCRC name badge and carry your authorisation with you at all times.

#### **4. Materials:**

Each (usually 2-person) interview team will have the following:

- (a) A digital voice recorder (and spare batteries)
- (b) A kit with the following: (i) a folder with a laminated interview guide; (ii) copies of the (green) Participant Information Statement; (iii) copies on the Consent Form; (iv) copies of a sources of help information sheet; (v) copies of the ISC.
- (c) A daily visits team sheet to record the street address of all properties visited and the outcome (interview completed, interview declined, not at home, leaflet left).

(d) Maps of the locations that have been assigned to you, and of the general area.  
Please bring with you several biros!

## 5. Conducting the interviews:

Remember that, when in this area, we are at best tolerated visitors, at worst unwanted intruders: we are asking people to give us their time to revisit events that may well have been, at the very least, anxiety-provoking and unpleasant. Our first principle is: **Do No Harm**. Have an introductory 'spiel' rehearsed, for when you approach a householder—usually this will be a 'cold call' at the residence:

***“Good morning. My name is Jim and this is Lauren. We are working for the Department of Fire and Emergency Services. We are visiting residents and asking them to assist us by being interviewed about what they experienced with the bushfire in January. We are doing this so as to prepare a report for the Department to help them improve community bushfire safety in the future. I would be very grateful if I could interview you about your experiences with the fire in January. It would probably take about 40 minutes or so. I have here a description of what we are doing. If you are interested in helping us, could you read through it, and if you agree we can do the interview now”. (If the resident wishes to be interviewed but it is not a convenient time, get contact details so a time for a telephone interview can be arranged).***

Give the person the green Participant Information Statement. Answer any questions. Say that you would like to record the interview to save time. If the person agrees, explain that because the interview will contribute to a formal report to WA DFES and the State Government it is necessary for us to have a record that the resident took part—stress the confidentiality of all records: only the interviewers and the Bushfire CRC will have access to any material: you sign and date the Consent Form, then ask the resident to do so. If the resident wishes to be interviewed but it is not a convenient time, get contact details so a time for a telephone interview can be arranged. Leave the Participant Information Statement and a blank Consent Form with the resident.

If the resident agrees to do an interview immediately, and signs the Consent Form, explain that the 'number 2' person will take notes and complete a checklist of topics covered while the interview proceeds so that a report can be compiled at the end of each day of interviews. Turn on the recorder and start recording—check the time display to make sure it IS recording. **YOU** begin by asking the resident to state the address of the property. Then say **“the date is\_\_\_\_, the time is\_\_\_\_”**. Then begin with the first question on the Guide about previous interviews or surveys; follow the Interview Guide flexibly while allowing the interviewee scope to tell his/her story, but do not let it degenerate into a pointless chat. Make sure all the numbered topics listed in the Guide are raised with the interviewee.

**You, the Bushfire CRC researcher, will be responsible for conducting the interview, your WA DFES partner will come-in at four points in the interview to ask about specific issues of high importance to DFES. These topics are highlighted in the revised Guide** The DFES staff member will also complete the ISC as best he/she can. If things get missed during the interview flow the two of you will usually be able to fill-in the missing bits after the interview by going through it together as soon as possible after leaving the premises.

At the end of the interview thank the person for their help, answer any questions they may have and give them a Sources of Help sheet, **IF YOU FORGOT TO BEGIN THE INTERVIEW BY GETTING THE ADDRESS, AND STATING THE DATE & TIME, DO IT NOW! THEN** stop the recorder.

**After completing the interview, and re-locating to a convenient stopping place away from the residence, both team members are to go through the Interview Check Sheet together to ensure that it is as complete and as accurate as possible. This is most important, please do NOT go on to your next interview until you have completed the ISC. Do NOT leave this most important task until later in the day!**

## 6. At the end of each day:

At the end of each day we will meet briefly to (a) discuss how things went, (b) check the data from the ISC, (c) download the recordings onto a computer file by way of backup; and (d) collect each team's daily visit log sheet. You may be asked to assist with the ISC checking.

## 7. Personal wellbeing:

Going on my experiences with post-bushfire interview task forces, some interviews can be quite impactful for some interviewers, this is most likely when the householder describes experiences involving threat to life or losses—home, pets, livestock, valuables and memorabilia. Over several days the cumulative effect can be emotionally draining. Mostly, simply talking about any such experiences with fellow-interviewers at the end of the day keeps things in perspective. Please talk to Jim about any personal concerns you have, or concerns about other task force members, or about how things are being organised and run.

Take **care** of yourself. Do not consume more alcohol than you would normally, make sure you get at least as much sleep as you would normally, if you are a regular exerciser make sure you organise your time so as to fit-in some exercise.

It is important that you maintain your realistic sense of perspective about the impacts of the bushfires on people you talk with and on you in your role as a researcher. Doing the following helps:

- (a) keep in regular daily contact with your family and friends—phone, texting, email; FaceBook, etc. BUT exercise discretion about what you say or put out in the public domain: respect householders' privacy and the confidential information they have revealed, remember that nothing on social media is private and that bushfires remain a highly emotive, divisive and political issue.
- (b) talk with fellow task force members about both your experiences in the field AND your 'normal' life apart from post-bushfire interviewing!;
- (c) catch a news broadcast (radio, TV, online) each day so as to retain contact with your wider world.

If, down the track, when the interviews have been completed, you are concerned that you may have been affected by some experiences more than you would have wished, consider seeking assistance from your university's counselling, or other similar organisational, service; or contact Jim.

Jim McLennan

Email: [j.mclennan@latrobe.edu.au](mailto:j.mclennan@latrobe.edu.au)

Mobile: 0438 096 548

March 2014



## **Questionnaire: Bushfire CRC Researchers' Experiences Following Interviews With Bushfire-Affected Residents: WA & SA January 2014 Bushfires**

(This questionnaire has been sent on request. Completion and submission will be taken to imply consent to take part in the above study, described in the Participant Information Statement. The research has been approved by the La Trobe University Human Ethics Committee: reference FSTE HEC 13/R82)

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Please complete by **highlighting** your chosen answers, or typing your responses. Return as an email attachment to Lindsay Pamment: [l.pamment@latrobe.edu.au](mailto:l.pamment@latrobe.edu.au). If preferred, a completed hard copy can be posted to Dr Lynette Evans, School of Psychological Science, La Trobe University, Bundoora, Vic., 3086 Australia.

1. **Your Gender:** ☐ Male ☐ Female

2. **Your Age Group**

☐ 20-24

☐ 25-29

☐ 30-34

☐ 35-39

☐ 40-44

☐ 45-49

☐ 50-54

☐ 55-59

☐ 60-64

☐ 65+

3. (a) What is the highest qualification you have been awarded?

☐ Doctorate

☐ Masters

☐ Four year degree –honours or graduate diploma

☐ Three year degree

☐ Other \_\_\_\_\_

**(b) What is your main study discipline?(one only)**

☐ Psychology/Behavioural Science

☐ Social Science (Sociology, Geography, Economics etc)

☐ Health Science (including Nursing)

☐ Medical Science

☐ Medicine

☐ Environmental Science

☐ Education

☐ Other \_\_\_\_\_

**4. (a) What was your occupational status at the time of your deployment(s)?**

☐ University academic staff member

☐ University Research Assistant

☐ University PG student

☐ Researcher/Consultant—other than a University role

☐ Other \_\_\_\_\_

**(b) What training or experience in interviewing did you have before doing the 2014 post- bushfire interviews? (all that apply)**

☐ Previous post-bushfire householder interviewing experience

☐ Previous other post-disaster householder interviewing experience

☐ Previous interviewing on sensitive topics experience

☐ Previous general research interviewing experience

☐ Previous counselling or other 'helping' experience

☐ Formal training in interviewing

☐ Formal training counselling or other 'helping'

☐ Other \_\_\_\_\_

**5. What fire areas did you go to for your interviews? (all that apply)**

☐ WA Mundaring

☐ SA Rockleigh

☐ SA Eden Valley

☐ SA Bangor

**6. (a) About how many interviews did you do in total? \_\_\_\_\_**

**(b) Did any of the interviews result in you experiencing negative emotions?**

☐ YES

☐ NO

**7. If yes, about how many interviews caused negative experiences? \_\_\_\_\_ IF NO, GO TO Q 10.**

**8. Can you summarise what it was about this interview that caused you to experience negative feelings? IF MORE THAN ONE, FOCUS ON THE INTERVIEW THAT WAS MOST IMPACTFUL ON YOU**

**8 (a) ☐ THREAT LEVEL TO THE HOUSEHOLDER'S LIFE OR LIFE OF OTHERS, AS DESCRIBED BY THE HOUSEHOLDER**

**Rate the level of threat to the householder on the following Householder Bushfire Threat Level Scale**

**8 (a) Householder/residents' Threat Level Rating experiences during the bushfire - tick ONE only**

<b>Scale Level</b>	<b>Qualitative Description</b>	<b>Behavioural Indicators</b>	<b>Notes</b>
LEVEL 7	Extreme threat to life: odds were about even for surviving vs perishing	Resident injured or otherwise seriously affected physically; companion(s) in the incident perished or were injured or were otherwise seriously affected physically	Injury NOT necessary if other factors indicate an extreme threat
LEVEL 6	Severe threat to life; any significant worsening of the situation might well have lead to death or serious injury	Resident (and companions) were not injured (or only minor) but: the house they were defending was destroyed and they had to seek shelter; or the vehicle in which they were escaping/sheltering sustained fire related damage or other impact damage.	House may have survived with severe damage
LEVEL 5	Serious threat to life: failure of a vital aspect of the defence, shelter, or escape procedure or "system" might well have lead to injury or death	The house being defended suffered some damage; the vehicle in which they were travelling had to drive through flames and/or dodge debris	Unexpected problems had to be solved— pump stopped
LEVEL 4	Significant threat to life: a sudden change in the situation might well have resulted exposure to threat of physical injury: change in wind direction, increase in ember storm intensity, surprise ignition of a fuel source as an emerging threat.	The house had to be actively defended, flames had to be extinguished; the vehicle had to be moved away from a heat source; the conditions were extremely hot while sheltering	
LEVEL 3	Moderate threat	Resident had to remain vigilant that the house was not impacted by fire or embers, had to shelter for up to half an hour in a vehicle from radiant heat, embers, smoke	Default for "left late, in danger"
LEVEL 2	Low threat	Resident saw smoke within 2 km, saw flames, observed embers falling.	Default for "left late, no danger".
LEVEL 1	Minimal threat	Resident saw smoke in the distance; relocated to a safe place with no danger; was aware of fires in the general area.	Default for "left early".
LEVEL 0	No threat	Resident not present on the day	

8 (b) ☐ **LOSS**    **nature of any loss(es) described by the householder:** tick all that apply)

- ☐ Family member(s)
- ☐ Friends/Neighbours
- ☐ House
- ☐ Pet(s)
- ☐ Valuables
- ☐ Memorabilia (photographs, letters)
- ☐ Financial/Economic/Livelihood/Administrative (includes documents, livestock, fences, sheds)
- ☐ 'Home'/'Place'/the environment
- ☐ Community
- ☐ The expected future/opportunities
- ☐ Other \_\_\_\_\_

8 (c) ☐ **ANY NEGATION/DISCOMFIRMATION OF THE HOUSEHOLDER'S WORLD AS SAFE, JUST, PREDICTABLE?**

(The householder's world was seen to have become: tick all that apply):

- ☐ Hostile
- ☐ Unfair
- ☐ Uncaring
- ☐ Indifferent
- ☐ Random, unpredictable
- ☐ Other \_\_\_\_\_

8 (d) ☐ **THE HOUSEHOLDER'S NEGATIVE EMOTIONS EXPERIENCED FOLLOWING THE FIRE** (tick all that apply)

- ☐ Grief
- ☐ Sorrow/sadness/despair
- ☐ Self-blame/Guilt
- ☐ Anger
- ☐ Resignation
- ☐ Other \_\_\_\_\_

8 (e) ☐ **YOUR** NEGATIVE EMOTIONAL EXPERIENCES DURING/IMMEDIATELY FOLLOWING THE INTERVIEW WITH THE HOUSEHOLDER? (tick all that apply)

- ☐ Helplessness
- ☐ Impotence/powerlessness
- ☐ Futility

- ☐ Sadness
- ☐ Frustration
- ☐ Anger
- ☐ Other \_\_\_\_\_

8 (f) ☐ **DID YOU EXPERIENCE ANY OF THESE STRESS-REACTIONS DURING/IMMEDIATELY AFTER A DISTRESSING INTERVIEW?**  
(tick all that apply)

- ☐ Diffuse general emotional distress—"upset"
- ☐ Holding back tears
- ☐ Sorrow/sadness
- ☐ Anger/Frustration
- ☐ Despair
- ☐ Hopelessness/pointlessness
- ☐ Helplessness
- ☐ Over-identification with the householder: excessive empathy, loss of 'professional' boundaries
- ☐ Other \_\_\_\_\_

**9. Can you summarise how you managed these emotions:**

**(a)---during an interview (tick al that apply)**

- ☐ Concentrated on my role, focussed on listening to the householder
- ☐ Tried to say something comforting/re-assuring to the householder
- ☐ Tried to say something to show I understood/accepted his/her distress
- ☐ Tried to ignore/suppress my feelings
- ☐ Other \_\_\_\_\_

**(b)---later in the day after an interview during the deployment (tick all that apply)**

- ☐ Went off somewhere to be by myself
- ☐ talked about it with a fellow team-member
- ☐ Talked about it with a team leader/senior team member
- ☐ Discussed it a family member/friend by phone/text/email/Face Book
- ☐ Drank alcohol
- ☐ Engaged in physical activity walked/ran/gym
- ☐ Other \_\_\_\_\_

**(c)---in the week after the interviews (tick all that apply)**

- ☐ Talked with family/friend
- ☐ Talked with a colleague
- ☐ Talked with a supervisor
- ☐ Talked with a counsellor
- ☐ Drank alcohol more than usual
- ☐ Exercised
- ☐ Immersed myself in work/other activities
- ☐ Other \_\_\_\_\_

**Q 10. Could the people who organised the research have done more to help you:**

**(a)---prepare for the interviews?**

- ☐ YES              ☐ NO

If YES, please describe

**(b)---manage any negative emotional effects of the interviews?**

- ☐ YES              ☐ NO

If YES, please describe

**11. The following is a list of negative experiences. Did you experience any of the following during your time in the bushfire affected area and up to a week after the interviews? . For each, choose one of:**

**No, I never experienced this.   Once or twice   On several occasions   Often   A lot-almost every day** [for each of (a) to (t), **highlight** (or circle on a hard copy) the chosen response]

**(a) I felt emotionally numb.**

No, I never experienced this.   Once or twice   On several occasions   Often   A lot-almost every day

**(b) My heart started pounding when I thought about some of the interviews.**

No, I never experienced this.   Once or twice   On several occasions   Often   A lot-almost every day

**(c) It seemed as if I was re-living the fire as experienced by the residents.**

No, I never experienced this.   Once or twice   On several occasions   Often   A lot-almost every day

**(d) I had trouble sleeping.**

No, I never experienced this.   Once or twice   On several occasions   Often   A lot-almost every day



**(e) I felt discouraged about the future.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(f) Reminders of some of the interviews upset me.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(g) I felt down-hearted and 'blue'.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(h) I had little interest in being around other people.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(i) I felt jumpy.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(j) I was less active than usual.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(k) I thought about some of the interviews when I didn't intend to.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(l) I had trouble concentrating.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(m) I avoided things that reminded me of some of the interviews.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(n) I had disturbing dreams which seemed related to the interviews.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(o) I was unable to become enthusiastic about anything**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(p) I thought that did not want to do any more interviews like these.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(q) I was easily annoyed.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(r) I expected something bad to happen in my life.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**(s) I found I couldn't remember some of the interviews.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day.

**(t) Things around me did not seem real.**

No, I never experienced this. Once or twice On several occasions Often A lot-almost every day

**12. Can you recall: were you experiencing any of these things a month or more after the interviews?**

☐ YES ☐ NO

If YES, which of (a) to(t)?

**13. Do you think your experiences as a post-bushfire interviewer had any lasting impacts on you?**

☐ YES      ☐ NO

If YES, please describe

**14. How are you feeling at the moment after having completed the questionnaire?**

**15. Is there anything else you think it important for the research team to note about the post-bushfire interviews and your post-bushfire interviewing experiences?**

Thank you for your assistance. We hope to have a report available on the Bushfire B&NH CRC web site in early 2015

Please return your questionnaire to Lindsay Pamment as an email attachment: [l.pamment@latrobe.edu.au](mailto:l.pamment@latrobe.edu.au) She will delete your email after saving the questionnaire. Alternatively, please post a completed hard copy to:

Dr Lynette Evans  
School of Psychological Science  
La Trobe University  
Bundoora, Vic., 3086 Australia