

**Recovering
from the 2003
Canberra
bushfire:
A work in
progress**

**Peter Camilleri
Chris Healy
Elspeth Macdonald
Susan Nicholls
Jolyon Sykes
Gail Winkworth
Merrilyn Woodward**

First published in 2007
Copyright © The authors 2007

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system, without prior permission in writing from the publisher. The *Australian Copyright Act 1968* (the Act) allows a maximum of one chapter or 10 per cent of this book, whichever is the greater, to be photocopied or digitally scanned by any educational institution for its educational purposes provided that the educational institution (or body that administers it) has given a remuneration notice to Copyright Agency Limited (CAL) under the Act.

Published by Australian Catholic University
223 Antill St,
Watson ACT 2602

ISBN 978-0-9581879-2-3

ACKNOWLEDGEMENTS

This Report has been prepared for Emergency Management Australia in fulfilment of project grant 04/2005.

The researchers wish to thank ACT Health for their support of the project through the funding of a principal research officer.

Our thanks are due also to Professor Beverley Raphael for her conceptual and methodological contribution to the research.

We would also like to thank Professor Greg Smith for his critical review of an early draft of this report.

Our thanks also go to Merrie Carling (Director of Child & Adolescent Mental Health, Mental Health ACT), Michael Woodward (Principal Social Worker, Mental Health ACT) and Elise Newton (previously Recovery Worker, ACT Bushfire Recovery Centre) for their helpful feedback on disaster-response service issues.

Finally we wish to thank the hundreds of Canberra residents who participated in this study and wish to see their experiences contribute to continual improvement of recovery management practices in Australia.

May 2007

CONTENTS

Executive Summary

Chapter One Introduction and overview of the project

Introduction	2
Community recovery	3
Role of government in community recovery	14
Recovery as an end-point	17
Project overview	19
Project team	21

Chapter Two Research methodology

Introduction	24
Multi-strategy methodology	25
Ethical process and issues	31

Chapter Three The participants

Introduction	33
Who were the participants?	33
Recovery Centre data	37
Summary	38

Chapter Four Effects of the bushfire on participants

Introduction	41
Housing and living situation	42
Work situation	46
Financial situation	47
Relationships with family	47
Relationships with friends	52
Relationships with neighbourhood	53
Spiritual belief	55

Chapter Five Health and well-Being of participants

Introduction	57
Loss and well-being	57

	Health and well-being	61
	Mental health and well-being	69
	Children and health	79
	Life in general	81
	Bushfire-related stressors	86
Chapter Six	What helped and what hindered recovery	
	Introduction	89
	Sources of help and support	89
	Community development and community events	102
	Self help and mutual help	105
	Key strategies for personal recovery	115
	Factors relating to the physical environment	129
	Summary	131
Chapter Seven	Communication and Media	
	Introduction	132
	The nature of communication	133
	Summary	144
	Media usage for recovery-related information	145
	A bushfire affected audience	146
	Type of media content that were helpful	147
	Type of media content that were unhelpful	148
	The cleavage plane concept	151
Chapter Eight	Implications for policy, planning and delivery of services	
	Introduction	155
	Whole of government approaches	155
	Recommendations	157
	Communication and information provision	157
	Recommendations	159
	Medium and long term mental health outcomes	162
	Recommendations	166
	Community and individual resilience	167
	Recommendations	171

Figures

Figure 1	Ages of respondents	33
Figure 2	Household composition of respondents	35
Figure 3	Ages of persons registered with the Recovery Centre	38
Figure 4	Self-report of lasting positive and negative effects of the bushfire	41
Figure 5	Ages of the children respondents identified as having recent bushfire difficulties	50
Figure 6	Prevalence of fire-related losses and stressors	58
Figure 7	Number of fire-related losses and stressors	59
Figure 8	Number of bushfire-related stressor and losses	72
Figure 9	Psychological distress: proportion of Respondents by Kessler 10 score and age group	76
Figure 10	Psychological distress: proportion of ACT adults by Kessler 10 Score and age group	76
Figure 11	Self-report of day-to-day life after the bushfire compared with before the bushfire	83
Figure 12	Self-report of day-to-day at about three years after the bushfire compared with before the bushfire	84

Tables

Table 1	Post-traumatic stress symptoms experienced over the past four weeks	71
Table 2	Current levels of psychological distress	75
Table 3	Comparisons of rates of high/very high psychological distress between community survey and other epidemiological studies	77
Table 4	Level of non-specific psychological distress by post-traumatic stress symptoms	78

Bibliography

Executive Summary

Background

It is more than three and a half years since Canberra experienced the devastating 'firestorm' on January 18 2003 in which 4 people died, 3 people were treated for serious burns at the Royal North Shore Hospital, 49 people admitted to ACT hospitals and 440 people received outpatient care. 488 houses were destroyed in both urban and rural ACT. Nearly 160,000 hectares were burnt in the ACT including over 16,000 hectares of plantation forests and 31,000 hectares of rural leases. More than 5,000 people were evacuated to the emergency centres and many more went to family and friends for safety.

A State of Emergency existed from the onset of the firestorm on the 18th January until it was lifted on the 28th January 2003. Over 50,000 residents lost their utility services (electricity, gas and water) during the early post-fire stage. 1600 households registered with the ACT Bushfire Recovery Centre for assistance.

This report details a research project that looked at aspects of the recovery process following the January 2003 bushfire. The research was funded by Emergency Management Australia and undertaken by a multidisciplinary research team drawn from the Australian Catholic University, the University of Canberra and the ACT Government. Additional funding was provided by Mental Health ACT

Project overview

The literature on emergency management, community resilience and recovery is rapidly growing. However, as our review of the literature in the body of this report demonstrates, there are still considerable gaps in the literature concerning the nature of recovery, in particular the medium to long-term nature of recovery. Accordingly, the purpose of this research project has been to investigate the process of individual and community recovery from a natural disaster, looking particularly at the medium to long-term recovery process following the 2003 Canberra bushfire.

The project had four interlocking strands related to the medium and long-term impact of the bushfires, examining:

- Individual and community recovery and resilience;
- Government and community recovery programs;
- Mental health outcomes for individuals; and
- Communication and information provision.

The research, which was conducted between September 2005 and July 2006, focused on finding out what was most helpful to individual and communities on the path to recovery, including what actions, services, attitudes, behaviours, relationships, communication activities and other interventions helped people and what assisted longer term recovery. It also sought to identify factors that hindered recovery.

There were two main research strategies. The first was a questionnaire administered as a postal survey and distributed at the beginning of April 2006 (i.e. after the Canberra bushfire season) to approximately 1600 households registered with the ACT Bushfire Recovery Centre. The survey comprised 126 questions enabling respondents to provide quantitative and qualitative responses on a range of topics related to the impact of the bushfire. It included multi-item ratings and a number of open-ended questions designed to elicit brief personal narratives. Data sets were obtained for 500 respondents.

The second strand involved follow-up face-to-face interviews with forty individuals selected from among those survey respondents who returned a form indicating interest in being interviewed. Many more respondents were interested in being interviewed than project resources allowed, so we were able to select a sample of interviewees on the basis of obtaining equal numbers of males and females and a good representation of ages, households with and without children, and varying locations of current residence.

The interviews, conducted over a four-week period from mid-May to mid-June, 2006, were semi-structured and approximately one hour long and up to two hours where

necessary. Participation was completely voluntary and all interviewees provided written informed consent. Analysis of the data from interviews was undertaken by drawing from summary notes made by the researchers. In-depth analysis of the interview data was beyond the scope of this project. However, these individual accounts were used to add richness and detail and clarify issues identified from the survey responses; and provided valuable additional insight into the lives of those affected by the fires and ways to support people following future bushfires and other disasters.

Ethical considerations

The research was approved by the ACT Health and Community Human Research Ethics Committee, and the Australian Catholic University and University of Canberra Human Research Ethics Committees.

Given the possible adverse or unforeseen effects associated with research on survival of trauma, we were aware of our ‘duty of care’ to participants and identified strategies for dealing with any adverse consequences of participation. Specific risk management/harm minimisation strategies were employed.

Profile of the research participants

The following key aspects of the demographic data for the 500 survey respondents represent a summary of a more detailed profile set out in Chapter 3 of this report.

- Respondents to the survey were more likely to be women than men.
- Most respondents (60%) were middle-aged, that is between their mid-40 and 60’s.
- The majority of respondents were highly educated: nearly half (46%) had completed a university degree and approximately one quarter (26%) had certificate level education.

- 43% of the respondents reported that their home was destroyed in the fires. The total number of homes destroyed was 488 and 214 people whose homes were destroyed responded to the survey. This has important implications for the data as it indicates that those who experienced severe loss of property and many exposed to threat of life and injury wanted their ‘voices’ heard.
- Just over half (52%) the respondents were in full-time work, approximately one-third (34%) were not in the labour force, and few (2%) were looking for work. The estimated annual family income was high (over \$75,000) for about half (51%) the respondents; however, just over one quarter (28%) had estimated annual family income of up to \$50,000.
- The most common household size was two people.
- Nearly one-fifth of respondents (23%) reported having one or more children aged 4 to 17 living with them in their household.

Recommendations for policy, planning and delivery of recovery services

The research team believes the study has demonstrated that individual and community recovery after the Canberra bushfire has been the combined result of the services and support provided through formal and informal services, government and non-government, and the actions that people took to help themselves and each other. Also it is clear that personal characteristics, qualities and circumstances impacted on how, and the extent to which, individuals were able to utilise the support that was available and to participate in community recovery activities.

Within this framework of factors that influenced recovery, we observed that there was no single and universally shared experience or factor that helped or hindered everybody. Responses about almost every aspect of recovery were marked by their diversity across the population that we surveyed and interviewed. This diversity has significant implications for recovery planning if we are to deliver services that respond to needs across the whole of the disaster-affected community.

The remainder of this section lists the major recommendations emerging from the research, grouped according to the four major areas of focus. These should be read in conjunction with Chapter 8 which discusses the implications and recommendations for policy, planning and delivery of recovery services and possible future research.

Whole of government, in partnership with community, approaches to recovery:

It is recommended that governments and communities managing community recovery after disaster:

- Adopt a coordinated task force approach
- Ensure that the Task Force includes community representation and is advised by a community reference group and service providers
- Note that community recovery will take years and that services must be in place for extensive periods

It is recommended that recovery managers note the effectiveness of:

- The one stop shop, recovery centre model in the provision of services to disaster-affected people
- The effectiveness of recovery workers as the case managers in disaster recovery and their effectiveness in providing community support to emerging groups, streets neighbourhoods, and villages
- The need to identify groups that may feel that they are not receiving services and put strategies in place to reach them

Communication and Media

Overall, information and communication provided by the ACT Government to assist in recovery was praised by respondents. In particular, the newsletter *Community Update*

was singled out by a large majority of respondents as meeting their needs. With very few exceptions, the mass media served the affected community very well. Recommendations emerging from the research include:

- Timeliness and consistency of information provision should be improved
- New ways of telling people where to get information and resources should be explored
- Newsletters designed for the affected community should avoid ‘over-cheeriness’; reflect people’s actual experiences across a range of good and bad, and address all affected stakeholder groups; community input should be strongly encouraged
- Overtly political presence and content in newsletters should be minimised
- Ensure that media briefings and releases involve all media available to the post-disaster community (including internet and community media) and cover all recovery-related issues as soon as they emerge.

Long term mental health outcomes

While many people did not experience lasting negative psychological outcomes following the 2003 Canberra bushfire, a considerable number of individuals continue to encounter ongoing mental health and psychosocial problems. However, this scenario is to be expected given the presence of risk factors (such as a high degree of exposure and losses and related ongoing stressors) and has been reported in the context of other Australian natural disasters including bushfires.

Recommendations emerging from the research include:

- That service providers assist individuals who require support for a range of ongoing disaster-related mental health and psychosocial problems.

- That service providers investigate and implement effective strategies to optimize outcome in terms of mental health and psychosocial problems in the medium- and long-term post-disaster.
- That service providers investigate ways to assist individuals at various life stages to minimise a range of disaster-related mental health and psychosocial problems that may occur in the years post-disaster.
- That funding bodies support comprehensive analysis of data provided by disaster-affected individuals in order to strengthen and clarify the existing understanding of mental health in the context of medium- to long-term recovery processes.
- That funding bodies support development of pre-prepared research methodologies that are ready to adapt and use at the time of disasters.
- That funding bodies support Australian-based longitudinal follow-up and outcome studies to evaluate interventions, and research that focuses on children/young people and their parents together within the same studies.

Individual and community resilience

In order to support individual and community resilience, it is recommended:

- That information about how recovery, including medium and long term recovery, takes place be made available to individuals and families to help them understand their own responses and/or those of others in the family.
- That the community generally be provided with information about the nature of recovery to facilitate greater understanding and tolerance of the feelings and experiences of disaster victims, in particular that individuals experience recovery at their own pace and in their own way.

- That support be provided for the development of self-help and mutual help groups, with a particular focus on volunteerism following a natural disaster, to harness the energy and creativity and increased sense of control that seems to result from this kind of involvement.
- That governments ensure transparent and expeditious handling of any investigation of their roles and responsibilities related to a natural disaster and its aftermath.
- That governments note that research which engages communities in thinking and reflecting on their experiences after a disaster can itself be therapeutic and should be undertaken at key points in recovery – the short, medium and long term.

Chapter One – Introduction and overview of the project

Introduction

It is more than three and half years since Canberra experienced the devastating ‘firestorm’ in which 4 people died, 3 people were treated for serious burns at Sydney hospitals, 49 people admitted to ACT hospitals and 440 people received outpatient care. 488 houses were destroyed in both urban and rural ACT. Nearly 160,000 hectares were burnt in the ACT including over 16,000 hectares of plantation forests and 31,000 hectares of rural leases. More than 5,000 people were evacuated to the evacuation centres and many more went to family and friends for safety.

A State of Emergency existed from the onset of the firestorm on the 18th January until it was lifted on the 28th January 2003. Over 50,000 residents lost their utility services (electricity, gas and water) during the early post-fire stage. 1600 households registered with the ACT Bushfire Recovery Centre for assistance.

January 2003 also saw fires throughout New South Wales and Victoria. The severity of the fires in these states and the ACT was immense and “shocked the Australian community” (*A Nation Charred*, 2003, p.1). The Report of the *Bushfire Recovery Taskforce of the ACT* stated that the “January 2003 bushfires in the ACT ranks as one of the largest single day disasters in Australian history” (p.5).

The experience of seeing the National Capital ‘burning’ led to serious examination of the causes of the fires by a variety of Territory and Commonwealth Inquiries. The ACT Government initiated an Inquiry into the bushfires and the *Report of the Inquiry into the Operational Responses to the January 2003 Bushfires in the ACT* (the McLeod Inquiry) was released in 2003. The ACT Coroner also initiated an investigation and whilst this has been subject to considerable legal challenges a final report is expected to be handed down later this year. The Commonwealth House of Representatives Select Committee on Recent Australian Bushfires also produced a report *A Nation Charred: Report on the Inquiry into Bushfires in 2003*.

There is considerable debate concerning the background causes of the bushfires and the immediate operational and emergency recovery responses. It is beyond the scope of this

project to address any of these issues as the project focused solely on the nature of the recovery process. It is important to recognise these issues, as they are the context for many residents as they move towards 'recovery'.

For most Australians the fires of January 2003 are a receding memory but for those directly affected it has been a defining moment in their lives. Disasters and their management have been a major feature of the Australian landscape. The severe fires of 1939, 1967 and Ash Wednesday 1983 have provided many important lessons about the nature of bushfires, how they are managed and the responses to them. It is hoped that the experience of the 2003 Canberra bushfires for both short and mid-term recovery can lead to further improvement in the capacities of both communities and governments to deal with future events.

Community Recovery

The concept of recovery is problematic. Much of the literature on natural disasters and emergency management tends to conflate mitigation, response, relief and recovery. There are obvious overlaps in these and the capacity of individuals and communities to recover from disasters is likely to be affected by the immediate response to the disaster (Pettersen, 1999:6). As a term recovery implies re-establishing what was before. A natural disaster is a major event, which changes the nature of the social, economic and environmental community.

“A natural disaster is a serious disruption to a community or region caused by the impact of a naturally occurring rapid onset event that threatens or causes death, injury or damage to property or the environment and which requires significant and coordinated multi-agency and community response. Such serious disruption can be caused by any one, or a combination of the following natural hazards: bushfire; earthquake; flood; storm; cyclone; storm surge; landslide; tsunami; meteorite strike; or tornado”. (DOTARS, 2004:4)

Australia's current system of disaster relief has traditionally focused much more strongly on the provision of shelter, food, clothing and finances and restoring damaged infrastructure in the relief phase (DOTARS, 2004). Recovery of communities and

individuals is only a new and emerging focus of Australia's approach to dealing with disaster. There has also been a shift from focusing on the hazard, which is to be managed or controlled, to managing 'risks' (Coles & Buckle, 2004:6).

Emergency Management Australia (EMA) has also shifted its emphasis to integrated recovery management in which the focus is on being 'community-centric', flexible and integrated into the emergency management process (Sullivan, 2003:4). Recovery and recovery-related concepts in disaster management literature are complex and have been viewed in varied ways. EMA describes recovery as an *intervention process* to lessen the effects of disasters:

Recovery is defined as the coordinated process of supporting disaster affected communities in the reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical well-being... Recovery is, however, more than simply the replacement of what has been destroyed and the rehabilitation of those affected. It is a complex social and developmental process rather than just a remedial process. The manner in which recovery processes are undertaken is critical to their success. Recovery is best achieved when the affected community is able to exercise a high degree of self-determination. (EMA 2004:3)

The State of Victoria State Emergency Response Unit defines recovery as:

an enabling and supportive process which allows individuals, families and communities to attain a proper level of functioning through the provision of information, specialist services and resources. (VSERU, 2000 as quoted in Sullivan, 2004: 4)

Recovery has also been described in terms of a phase of a disaster:

The recovery phase is the prolonged period of return to community and individual adjustment or equilibrium. It commences as rescue is completed and individuals and communities face the task of bringing their lives and activities back to normal. Much will depend on the extent of devastation and destruction that has occurred as well as injuries and lives lost (NSW Institute of Psychiatry and Centre for Mental Health.2000:18).

However, recovery has also been referred to as an act or process for individuals recovering from the negative effects of traumatic events. Recovery has come to signify an active process of integrating the traumatic events so that their destructive impact on one's life is minimised as one moves forward into a post-trauma future in which one's self and one's world will have changed. Using the term in this sense is not to imply that everyone who has experienced a traumatic event has to integrate the event and its effects.

The term recovery also connotes a trajectory in which normal functioning temporarily gives way to threshold or sub-threshold psychopathology (e.g., symptoms of depression or post-traumatic stress disorder [PTSD]), usually for a period of at least several months, and then gradually returns to pre-event levels (Bonanno 2004:20).

Although the term recovery is widely used in the disaster-trauma literature and in disaster management policy, it remains poorly conceptualised and operationalized. The terminology of 'recovery' is often used in the literature but this is generally without operational definitions (Research and Evaluation: Mental Health Aspects of Disaster and Terrorism Consensus Conference, December 2005). There is little consensus regarding the nature of the construct of recovery following a disaster or about the most successful ways to promote it.

The Disaster Recovery Sub-Committee of the Community Services Ministers Advisory Council drafted a set of principles of recovery management in the late 1980s. These are featured in the Australian Emergency Management Manual. While the application of

these principles has shifted since this time, the principles still remain central the Australian approach to disaster recovery (Gear, 1999 and Sullivan, 2003). The principles state that recovery is most effective when:

- Management arrangements recognise that recovery from disaster is a complex, dynamic and protracted process;
- Agreed plans and management arrangements are well understood by the community and disaster management agencies;
- Recovery agencies are properly integrated into disaster management arrangements;
- Community service and reconstruction agencies have input into key decision making;
- Recovery services are conducted with the active participation of the affected community;
- Recovery managers are involved from initial briefing onwards;
- Recovery services are provided in a timely, fair, equitable and flexible manner;
- Recovery personnel are supported by training programs and exercises. (DOTARS, 2004:36).

These principles suggest a framework for recovery as part of the broader context of emergency management. The various definitions and principles outlined clearly use concepts of resilience and community. The models of integrated recovery management (Sullivan, 2003) imply resilience on the part of both individuals and communities. Communities are seen as central to the recovery process. In this section these concepts are explored and whilst it is not the intention of the project to provide a model of resilience and community, they are nevertheless central to our understanding of how participants in this study made sense of these for themselves.

Resilience

“Rural development and famine studies of the 1970s and 1980s shifted their analysis from what people lacked towards what actions they took to survive crisis, what their priorities were and how to build on what was already there. In the field of disasters, most emphasis has remained on

assessing needs, hazards and vulnerabilities - at the expense of analysing the strengths, skills and resources available within communities”. (World Disaster’s Report (IFRCRCS), 2004)

Healy et al define community resilience as ‘individual and collective capacity to respond to adversity and change’ (Healy et al., 2003). Reference to ‘community’ has been increasing in Australian social policy in recent years. Notions such as community development, community capacity, social capital and community resilience are common in government documents. It is often difficult to pinpoint an exact definition of these terms or indeed to assess and measure the characteristics of a resilient community or a community with high levels of social capital. However, this section looks at some common elements of characteristics of ‘community and individual resilience’ emerging in the literature.

The section has been divided into three areas; pre existing factors, post disaster action and planning for Recovery.

(i) *Pre –existing Factors*

Socio-economic Position

Natural disasters magnify existing social problems and inequalities within a community. An extreme natural hazard may be the trigger for a disaster, but the after effects are the product of social, political and economic forces that exist in everyday life. Studies have shown that the capacity of a household to recover from a natural disaster is closely linked to their financial situation. Some specific contributing factors include appropriate house insurance, tenure type, income, disposable income and savings. Financial resources also put communities in a stronger position to recover from a disaster (Dwyer, 2005:211; Bolin and Stanford, 1998:22, Pettersen, 1999:6).

“The access people have to resources, including employment, health-care, social support, financial credit, legal rights and education is part of what makes them vulnerable to, or secure from, disaster. This access includes the resources people have as a result of employment, savings and social network, as well as newly available resources from national or local relief programs after a disaster”. (Bolin and Stanford, 1998:22-23)

However, a disaster may have long-term benefits for communities by providing the impetus to address social problems. For example, Bolin and Stanford's study of responses to the Northridge Earthquake in California in 1994 found that the earthquake renewed pressure to respond to long standing housing problems (such as a lack of low cost housing) as part of the reconstruction effort. The Federal Government provided funding for community based reconstruction programs (with funds channelled to local non-government agencies). These programs were effective in generating community participation in the reconstruction effort and became a means for identifying and responding to unmet community need following the earthquake (Bolin and Stanford, 1998:33).

“By developing programmes attuned to specific local needs, particularly those not met by conventional federal programmes, the needs of the persistently vulnerable can begin to be addressed, particularly in the realm of affordable housing that meets current seismic codes”. (Bolin and Stanford, 1998:33)

Social Capital

Social Capital is a term used widely in social and government policy research. It generally refers to factors which contribute to the well-being and social and economic stability of a community – factors such as social cohesion, trust, support, networks (Dwyer, 2005). While the term tends to be quite broad and vague a number of agencies, including the World Bank and the Australian Bureau of Statistics, have attempted to define a set of indicators by which to measure social capital. The indicators include such things as individual's membership of organisations and community groups, contact with family and friends and feelings of safety and trust within a community. Some studies also look at levels of volunteerism within a community (Dwyer, 2005:217). Johnson, Headley and Jensen (2005) have recently provided a literature review on social capital and communities. They have reviewed a variety of approaches to aggregating measures of social capital with the “possibility of including both stock and flow measures in the National Income Accounts” (Johnson, Headley & Jensen, 2005: 3).

Woolcock and Narayan's (as analysed in Healy et al, 2003) model of social capital incorporates four dimensions which has implications for disaster recovery:

- Bonding – the social connection that build on informality and similarity such as close family and friendship ties
- Inter community bridging – the ties across borders of local communities which may enable access to resources and support
- Intra community bridging – networks within the community which provide a basis for shared identification and support
- Linking – alliances between communities or individuals or groups with formal power. Such links may facilitate access to government, the business sector or non-government agencies

A sense of self-determination and self-efficacy is highlighted in other studies as important to community recovery (Dwyer, 2005:213). The study found that intra-community bonds (that is strong neighbourhood ties) were an indicator of general optimism about life and a sense of life being manageable. Participants in their study, particularly in rural areas, made frequent references to reliance on other community members for practical assistance. The study also found that the perception that local government and local business were working in the interests of the community contributed to people's sense of life being manageable. On the other hand family and friendship bonds were found to contribute to feelings of optimism but not necessarily the feeling that life is manageable (Healy et al., 2003).

The same study found that the absence of inter-community bridging capital and linkages to the decision makers (especially government and business) led to a strong sense of stigma and isolation from surrounding communities and a sense of fatalism, that is a lack of a sense of control over forces shaping their lives (Hampshire and Healy, 2002).

Dwyer (2005) utilized data from the General Social Survey (GSS) conducted by the Australian Bureau of Statistics (ABS) to explore factors which may influence long term recovery if a disaster were to hit Perth, Western Australia. The GSS, administered by

The ABS in 2002, measured various attributes considered to contribute to social capital. Dwyer looked at seven data items:

- Ability to raise emergency money

- Ability to ask for small favours
- Frequency of face-to-face contact with family and friends
- Feelings of safety at home alone after dark
- Sources of support in times of crisis
- Participation in organised and non-organised activities
- Type of unpaid voluntary work

The ability to raise emergency money refers to the capacity of individuals to access \$2000 in one week from sources such as savings or loans from institutions or friends. The ability to raise emergency money is considered a strong indicator of longer-term financial resilience. According to the results of the GSS the ACT has the highest capacity in Australia to raise emergency money, with 90.5% of respondents able to raise emergency money (Dwyer, 2005:217).

The ability to ask for small favours is an indicator of the strength and reliability of informal social networks in a community, it also suggests whether or not people would be inclined to ask for assistance should they need it – which is likely in a post-disaster situation.

In the ACT, 90% of respondents to the GSS indicated they have face to face contact with their friends and family outside their household at least once a week. How often people have contact with family and friends is an indicator of the level of support they may be able to access in a post-disaster scenario (Dwyer, 2005:218). The GSS also asked people who they would most likely turn to in event of a crisis. Across Australia, people were most likely to turn to a family member or friend. A much lower proportion would turn to a community, charity or religious organisation or the local council or government service. This indicates the high importance of community and family connectedness in the recovery period (Dwyer, 2005:220). Loss of these connections following a disaster may have a negative impact on an individual's capacity to recover (Gordon, 2003:1).

“Change in community arrangements itself constitute stress, but emergencies shatter the sense of continuity of life, community, culture and relationships that are themselves resources for recovery”. (Gordon, 2003:2)

Dwyer's (2005) findings also suggest that many individuals or families may have never accessed a formal service for assistance (whether government or non-government) prior to a post disaster situation. This may mean people are unfamiliar or unconfident with the process of accessing such services. There may also be a psychological dimension. If people have not previously required the assistance of formal services, it may challenge their self-identity or sense of independence.

(ii) *Post-Disaster Action*

Community Participation and Acknowledgement

Eyre suggests that recovery is aided by survivors being given an opportunity to 'tell their story' and for their experiences and opinions to be acknowledged. This has implications for the way in which inquiries and investigations are run. If these allow for community opinions to be heard and demonstrate that action is being taken in response to a disaster they may contribute to the recovery process (Eyre, 2004).

A study by Lowe and Fothergill (2004) who examined community responses to the September 11 attacks in the United States found that, although at times the outpouring of disaster support by volunteers can overwhelm authorities at the initial post-disaster emergency stage (this is probably less so in the longer term recovery stage), volunteering helped community members transform their feelings of being victims into ones of empowerment, thereby creating a positive basis for long term recovery. Volunteering gave people an opportunity to connect with other members of the community and reinforced their sense of belonging and self-worth following a traumatic event. Lowe and Fothergill recommend that planners consider this aspect of volunteerism in disaster recovery plans (Lowe and Fothergill, 2004:303).

A number of studies also indicate that public participation fosters a sense of community ownership in the recovery process (Pettersen, 1999:16). Communities which have a greater degree of self-determination are in a stronger position to recover (Dwyer, 2005:213). Self-determination may, in part, be enhanced by the financial position of communities and individuals. Those with greater wealth are likely to have greater choice and capacity to organise their recovery needs. They may also have more political agency, through established contacts or more confidence making political demands.

Studies on community recovery have consistently found that locally driven, bottom up approaches to recovery are the most effective (Pettersen, 1999:13). Community recovery groups which have a level of responsibility for oversight and decision making in the recovery effort help support recovery efforts (Pettersen, 1999:17; Manock, 2001:10). In her study of the community response to fires in Bitter Root Valley, Western Montana in 2000, Halvorson found that the community based networks that emerged in response to the fires were central to both long term recovery and mitigation. For example, the “Friends of Bitter Root” as the post-fire community groups became known were instrumental in organising volunteers to undertake fuel reduction measures (trimming trees, moving wood piles and so forth) (Halvorson, 2002:8). Residents also gained a greater sense of being part of the community, and felt more connected to, and supported by others because of the community based networks that developed in the aftermath of the fires. Social capital, in effect, increased because of the fires (Halvorson, 2002:8).

(iii) Planning for Recovery

Studies indicate that many communities do not have long-term disaster recovery plans. Most disaster management plans focus heavily on the immediate emergency management and give only minimal, or no, attention to long-term recovery (Pettersen, 1999:7). Disaster recovery plans could look at factors such as the impact of immediate post-disaster response on long term recovery. They may also create an opportunity to resolve potential conflict over the path for recovery before the event (Pettersen, 1999:7). The community structure pre-disaster is not equipped for the demands of a post-disaster situation and recovery process. Structures, including local government, local services and the way in which the community interacts with each other and these services, must adapt to these changing demands (Gordon, 2003:16). A comprehensive recovery plan may be able to pre-empt and prepare for this.

“Based in local government or other community agencies, (the plan) can establish relationships with the various interest stakeholders to ensure consultation and participation in needs assessment, planning and delivery of services. Where possible, it promotes groups to form and advocate for their own needs or helps them to cater for themselves and ensures recognition of the extent of the impacts...Plans to manage recovery using adaptations of normal community systems can be activated, and by

incorporating emerging groups into a broad system of communication, existing community processes and structures can reorganize themselves to adapt to recovery needs”. (Gordon, 2003:21)

Concept of Community

The concept of community has a long and proud history in Sociology. From Tonnies to Weber the concept has been central to the sociology project. The transformation of society to modernism saw at times a nostalgic reflection of ‘rural communities’ as being ‘organic and in sharp contrast to the modern state’. In the late twentieth and early twenty-first centuries particularly governments have resurrected the concept of ‘community’ as the rationale for the changing nature of service delivery and the refocus on the individual.

Johnson, Headey and Jensen (2005) argue that the concern about ‘community’ occurs during immense periods of social change and transformation. During this period of globalisation there are contradictory pressures on the major institutions responsible for human welfare – families, markets and governments. It is seen that the ‘community’ can do things that governments and the market cannot. Though it is often implied in the concept of ‘community’, the so-called ‘community sector’ or third sector is that part of civil society in which relationships matter and services are delivered locally. In European countries especially those with a Catholic or corporatist tradition, the notion of community is central.

“The principle of ‘subsidiarity’, enshrined on European Union treaties and laws, is supposed to ensure that all decisions that can be taken at local community levels are taken there”. (Johnson, Headey and Jensen, 2005: 5)

The concept of community has been extended from the traditional sense of ‘geographic connectedness’ to ‘community of interests’ (Ife, 1995). Community is also seen as ‘good’. It assumes building of community will lead to harmony and cohesiveness. It assumes an absence of ‘politics’ or at least divergences of values, interests and beliefs.

The concept of community embedded in recovery management is spatial or geographic community (Marsh & Buckle, 2001). In this it is important to recognise that in

'community recovery', the 'community' as such may well include many diverse and disparate communities. They may be overlapping and extend beyond the physical boundaries of the 'community' to even international communities of interests. There will be considerable diversity of opinions. Many residents may feel already 'excluded' and the process of 'recovery' may further reinforce their exclusion.

Role of government in community recovery

Government services oriented to disaster management tend to focus predominantly on short-term relief. Longer-term recovery is often peripheral. Britton writes that this often means government services oriented toward longer term recovery tend to sit outside the 'mainstream' group of disaster management agencies (Britton, 1991:23). However, longer-term recovery is beginning to be recognised as an integral part of emergency management.

The DOTARS report suggests that the most important role of governments is to support the community to determine their own recovery needs. That is, building community capacity and sustainability (DOTARS, 2004). Similarly the Victorian State Emergency Recovery Unit suggests that a community development model is the most effective way to approach disaster recovery. They define this as

“the process by which the community as a cohesive and discrete entity attains a self-sustaining and independent level of functioning comparable to that which existed before the disaster (cited in Manock, 2001:10).”

As an example of the role of government in recovery, the Victorian Department of Human Services initiated a drought social recovery strategy in 2003. A key element of this strategy was to allocate funding to support the employment of community development workers to support the recovery process. In most cases the community development workers were managed by an auspice agency and supported by a local drought recovery committee (Betts, 2004:2). The evaluation of this initiative found that the community development officers could strengthen community resilience through: facilitating inter-agency networking and local government links and support, supporting community owned activities, and provision of core support services in town. The community development officers also facilitated the involvement of local (and major)

industry with the community (Betts, 2004:21). The important role of the community development worker in providing information, support and options for drought affected individuals, families and communities was highlighted (Betts, 2004:12).

A number of studies suggest specific things government can do to support community recovery groups. For example, Halvorson states that government authorities can play a role in facilitating networks between recovery groups in different areas, so communities which experience similar natural hazard risks (such as fire prone areas) can learn from each other (Halvorson, 2002:9). Manock (2001:11) suggests that regional, state and federal level agencies can support community based recovery committees or groups in specialist areas of disaster recover such as personal support services, appeal management, insurance, legal advice and so forth.

The role of the State/Territory government is crucial as they provide the legislative backdrop within which disaster management policy and practice occurs. The State also determines which agencies take responsibility for particular aspects of the response and recovery process and prescribe the level of authority given to each organisation (Britton, 1991:9). However, the literature on disaster recovery emphasizes the central role played by local governments in emergency management. Local governments are generally at the coalface of a disaster and have the most immediate connection with the local community. Studies suggest that communities have a speedier and more effective recovery when their local officials can facilitate a strong whole-of-government response, i.e. effective coordination across agencies (Manock, 2001:11).

Ellis et al in the *National Inquiry on Bushfire Mitigation and Management* produced for the Council of Australian Governments (COAG review) came to the following findings with regards to recovery from the 2003 Canberra Bushfires.

- The establishment of special whole-of-government recovery mechanisms (such as the ACT Bushfire Recovery Taskforce and the Victorian Ministerial Taskforce on Bushfire Recovery) was beneficial. However there is a need to ensure an effective transition back to normal management and service provision at a suitable point after the disaster. Longer term aspects of

recovery need to be maintained through existing community services (Ellis et al., 2004:176).

- In some cases, such as where the disaster affects a small, contained community, there may be some benefit in establishing a one-stop-shop recovery centre. However, in all other cases, services should be provided by the usual agencies and community organisations. The resources of such agencies may need to be augmented to cope with increased demand (Ellis et al., 2004:177).
- A case-management approach, which was used extensively in the ACT bushfire recovery, proved to be immensely valuable in assisting people to negotiate across of range of government and non-government organisations. Many people affected by the bushfire did not have experience dealing with community service organisations.
- Investing early, appeared to be important in gaining community confidence the recovery process. One example of this was the prompt organisation for clearing the destroyed properties.
- A high degree of community involvement in the recovery is important. In the ACT this involved the provision of guidance to the recovery taskforce by a Community and Expert Reference Group (CERG) (Ellis et al., 2004:177).
- Insurance is an important part of economic recovery for communities. Governments at every level should support and encourage property owners to take out insurance (Ellis et al., 2004:182).

The sense that government is available and willing to listen to the community seems to be an important factor in the recovery process. Communities, which have the capacity to be involved in, and have a sense of self-determination over, the recovery process, are in a stronger position to recover. A system, which facilitates two-way communication between communities and government, appears to be central to this. Community recovery groups, which take on a consultancy and liaison role as well as being active in

decision making around the recovery process, may form part of this system. Government employed community development officers could also play a key part in supporting the community to be involved in recovery efforts. Inquiries and investigations are an important tool in allowing the community to communicate with government. Processes which enable and encourage community volunteerism in response to a disaster also enable communities to lead the recovery process.

Socio-economic position has been shown to impact on the capacity of individuals, households and communities to recover from a disaster situation. This is largely due to a greater likelihood that those with stronger financial resources will have adequate insurance and financial capacity to rebuild housing and so forth. However it may also be due to the fact that those in high socio-economic position have a greater sense of access to decision-making and political power (and hence a greater sense of self-determination in the recovery process) and possibly greater actual contact with business and government representatives. The role of government may be to facilitate a sense of community empowerment and self-determination in less financially secure areas.

Recovery as an end-point

Recovery within the Integrated Emergency Management process articulates a model in which *prevention, preparedness, response, recovery* appear sequentially yet at the same time interact constantly with each other (Sullivan, 2003). Previous models tend to outline a sequential process, though it could be argued that they emphasis the stage at which the principle activities are centred and that each of these stages involve activities which are about the recovery process. Kates & Pijawka's model (as outlined by Sullivan, 2003: 9) include:

- The emergency period
- The restoration period
- The replacement reconstruction period
- The commemorative, betterment and developmental reconstruction period

The most interesting aspect of their model is that they argue that the *end-point* only occurs with the finalisation of the commemorative, betterment and developmental reconstruction period. The timeframe for this is much longer than recovery plans

designate. They note that “each of the periods have historically taken about ten times as long as that which occurred prior” (Sullivan, 2003: 9). In their model it is estimated that the final end point may be 500 weeks following disaster. Though Sullivan (2003: 9-11) argues that an enhanced recovery process can occur which shortens each of these stages and sees recovery occurring 200 weeks following the disaster.

This final stage is seen as extremely important as a way of giving people the support to ‘look back and look forward’ (Eyre, 2004: 27). Herman (1997) has argued that it is important in the recovery process that there is remembrance and mourning and importantly that there is a public forum for people to be heard and their experiences validated.

Recovery has also been viewed in terms of an *end-point* within a psychological framework. Recovery at particular points in time has been ascertained using measures of community levels of psychological morbidity, such as non-specific psychological distress or post-traumatic stress symptoms. A number of Australian studies have shown that bushfires are associated with an increase in psychological morbidity among individuals and communities experiencing loss (McFarlane & Raphael 1984; McFarlane et al 1997; McDermott et al 2005). Psychological morbidity data of communities exposed to disasters are frequently compared with epidemiological data from the general community or communities not experiencing a natural disaster.

Although post-disaster morbidity is likely to decline over time, the effects of the initial disaster and losses are likely to persist (Norris 2005). The effects of natural disasters can be chronic and delayed, and may require ongoing intervention. Symptoms can linger for months, even years, for a significant minority of individuals affected by disasters. The research suggests that we may be able to identify the persons who are most at risk for long-term distress fairly early in the process (Norris et al 2002b). However, it is critical to keep in mind that individual and community responses to natural disasters, such as bushfires, are likely to vary and many people do not experience negative effects. (Gordon 2004; NSW Institute of Psychiatry and Centre for Mental Health.)

There has been increasing recognition of the need to promote individual/community recovery and resilience following potentially traumatic disaster experiences (e.g.,

Bonanno 2004, 2005; Healy et al 2003). In order to gain a deep understanding of the impact of disasters and the behaviours of individuals and the community it is necessary to focus on medium and long-term responses (King 2002). Most disaster management plans mainly focus on immediate emergency management and devote only minimal, or no attention to long-term recovery (Pettersen 1999). Little is known about how individuals and communities respond in the long-term and what assists recovery.

Research into understanding how people deal with and recover from trauma may contribute to emergency management mitigation and our understanding of vulnerability and resilience. While these studies are primarily individual responses, they may also aid our understanding of community and the individual in the community (King 2002:9).

In this research we did not give specific definitions of define recovery and hoped people would talk about recovery in their own terms. We did however identify that some people have described recovery after a bushfire as an ‘experience of ups and downs, as you move forward’. We explained:

After a disaster such as a bushfire, most people usually find they feel a bit up and down for a while. However, not everyone responds in the same way. Lots of things influence how easy or difficult people find life after a disaster. We want to understand more about how life has been for you in the time since the bushfire – its ups and downs – and how you feel you are now [about three years later].

Project overview

The literature on emergency management, community resilience and recovery is rapidly growing. However, as the above overview of the literature demonstrates there are still considerable gaps in the literature concerning the nature of recovery. It is the medium to long-term nature of recovery that is of immense interest. In order to gain a deep understanding of the impact of disasters and the behaviours of individuals and the community it is necessary to focus on long-term responses (King, 2002). Little is known

about how individuals and communities respond in the long-term and what may assist recovery.

There is a dearth of studies investigating either medium- or long-term outcomes for children. Six and eight month studies have been conducted for children and adolescents exposed to Australian bushfires (McDermott et al 2005; McDermott & Palmer 2002; McFarlane 1987). To date published natural disaster research on children and adolescents has been within 2 to 24 months post disaster (McDermott, 2004). Studies have focused on children/adolescents or adults separately, rather than together. As ‘parental distress is a strong, and sometimes even the strongest, predictor of their children’s distress that has been replicated in a number of studies’ (Norris et al 2002a:237), it is important to examine children/adolescents and their parents together in the same study.

In determining the medium and long-term impacts of recovery we were guided by the literature, which focused on the first two years following a disaster. This indicated to the project team that the post two-year phase would seem to be appropriate timeframe for medium term. The project was seen within the context as an ongoing research project and the team are hoping to continue and invite participation in the next phase of the project, 5 years post-firestorm.

The purpose of the research project has been to investigate the process of individual and community recovery from a natural disaster, looking particularly at the medium to long-term recovery process following the 2003 Canberra bushfire. The aims of the research were to:

- Assess the impacts on individuals and the community of the January 2003 bushfire;
- Identify factors related to individual and community recovery and resilience;
- Evaluate strategies for promoting individual and community recovery and resilience;
- Evaluate the impact of recovery programs and practices on individual and community sustainability; and

- Assess the effects of communication practices on community recovery, and develop a model for government-community communication to assist and encourage recovery.

The research, which was conducted between September 2005 and July 2006, focused on finding out what was most helpful to individual and communities on the path to recovery, including what actions, services, attitudes, behaviours, relationships, communication activities and other interventions helped people and what assisted longer term recovery. It also sought to identify factors that hindered recovery.

The project had four interlocking strands related to the medium and long-term impact of the bushfires, examining:

Individual and community recovery and resilience;

Government and community recovery programs;

Mental health outcomes for individuals; and

Communication and information provision.

There were two main research strategies. The first was a questionnaire administered as a postal survey and distributed to approximately 1500 households registered with the ACT Bushfire Recovery Centre. The second strand involved follow-up face-to-face interviews with a small number of the survey respondents.

Funding was provided for the project by Emergency Management Australia, and the multidisciplinary research team was drawn from the Australian Catholic University, the University of Canberra and the ACT Government. Additional funding was provided by Mental Health ACT to support the project.

Project team

The Bushfire Recovery project was a unique research endeavour in which three parties agreed to pool their intellectual resources. Australian Catholic University took the lead

agency role, however, this was mainly for administrative purposes, and the research was undertaken as a collaboration of equal partners. It was also important to recognise that the ACT Government agencies were active parties in the research process.

While the ACT Health Department through its close interrelationships with Medical Schools in Universities has historically been a research active agency, this was not the case for the Chief Minister's Department. It was important that a tripartite agreement was signed between the ACT Government, Australian Catholic University and University of Canberra. In the agreement it was important to recognise that Universities are required to disseminate research and most importantly academic freedom was recognised as essential for the research process.

The project team consisted of two levels. The first was a large project research group, which oversaw the development of the research project and secondly, a much smaller research working group which actively undertook most of the research activities. The Project Research Group consisted of the following:

Professor Peter Camilleri (Australian Catholic University) Principal Researcher

Dr Colin Adrian (ACT Department of Housing, Disabilities & Community Services)

Ms Kandie Allen-Kelly (Australian Catholic University)

Ms Lucy Bitmead (ACT Chief Ministers Department)

Ms Chris Healy (ACT Chief Ministers Department)

Dr Elspeth MacDonald (ACT Health)

Dr Morag McArthur (Australian Catholic University)

Dr Susan Nicholls (University of Canberra)

Professor Beverley Raphael (ACT Health)

Mr Jolyon Sykes (University of Canberra)

Ms Linda Tompf (ACT Health)

Dr Gail Winkworth (Australian Catholic University)

Ms Merrill Woodward (Australian Catholic University)

The Research Working Group consisted of the following and all who have contributed directly to the writing of this report:

Professor Peter Camilleri (Australian Catholic University) Principal Researcher

Ms Chris Healy (ACT Chief Ministers Department)

Dr Elspeth MacDonald (ACT Health)

Dr Susan Nicholls (University of Canberra)

Mr Jolyon Sykes (University of Canberra)

Dr Gail Winkworth (Australian Catholic University)

Ms Merrilyn Woodward (Australian Catholic University)

It should be noted that a number of the project research group had involvement in the Canberra Bushfires. Some members were involved in the Bushfire Recovery Centre and the Bushfire Support Unit. Others have had extensive experience in emergency management. A number of members volunteered during the post-bushfire recovery period and of course were residents of Canberra during the firestorm of 18th January 2003 including being a resident in Weston Creek (though no member of the team were directly affected through loss of property or serious injury).

Chapter Two – Research methodology

Introduction

Researching recovery from such a traumatic event as the Canberra bushfires involved considerable sensitivity. The research team were aware that the process of remembering such a traumatic event may for some ‘re-traumatised’ them. The literature on this would seem to indicate however, that on the whole there are considerable benefits for participants.

“For many trauma survivors, sharing stories of trauma and their experiences provide an opportunity to give testimony about the past and is perceived as therapeutic”. (Seedat et al, 2004: 262)

Newman et al (1999) found that women participating in research on childhood victimisation were more likely to report their participation as positive and not regret participating. Only a small percentage reported unexpected upset as a result of participating. It is clear that some distress or discomfort is inevitable in such studies and this needs to be managed in the research process (Seedat et al, 2004).

The research team was concerned to prepare the community for the study. It developed a communication and information strategy that involved meeting with key community groups prior to the survey or interviews being conducted. Community briefings were undertaken with the Community Expert Reference Group, the Weston Creek Community Council and the Bushfire Community Development Network. Members also attended the 10th Annual Conference of Parliamentary Environment and Public Works Committees – “Sustainability and Bushfire Recovery” on 30th September 2005. Contact by email with the various community groups also occurred.

The research group also was contacted by the press and over the year received considerable TV, Radio and newspaper coverage. The research team also provided a number of press releases at the various stages of the research process. There was considerable media interest in the project. Part of the media interest was generated by the ongoing Coroner’s Inquiry into the bushfires and the attendant legal challenges to the Inquiry.

The research team delayed the data gathering exercise, as we were concerned that the questionnaire not be posted until the end of the bushfire season. The three-year anniversary heightened the sensitivity of the research team and they consciously sought to prepare the community for the study. Later in this chapter the ethics process is discussed in more detail.

Multi-strategy methodology

The use of a multi-strategy methodology was to overcome some of the perceived weaknesses of previous disaster studies. King noted:

...very few of the case study post disaster surveys used both the general approach of questionnaires and interviews etc., as well as post trauma specialist surveys. They were either one or the other – quite distinct groups of researchers and surveys. Furthermore the post trauma methodologies were oriented to specific psycho-social models or theories (King, 2002:8).

This project extended existing natural disaster research to include a multi-strategy approach using both survey and interview data derived from questions set by researchers of varying discipline backgrounds. The project used a multi-strategy approach comprising two strands:

- **Strand A:** a community survey sent to households registered with the Recovery Centre and others affected by the 2003 Canberra bushfire – referred to as ‘respondents’.
- **Strand B:** an interview study with a smaller number of participants who subsequently expressed an interest in being contacted about Strand B of the research and who consented to participating in an interview – referred to as ‘interviewees’.

Strand A: Community survey

Potential survey respondents were ACT residents and others who had registered with the Bushfire Recovery Centre/Support Unit (approximately 1600 households) or bushfire-affected ACT and nearby New South Wales residents who expressed an interest in participating in the research.

Respondents were 15 years of age and over. The team wanted to ensure that young people of late high-school age and above (i.e., a minimum age of 15 who were 12 at time of fires) were able to participate in the research. These young people were up to 15 years of age at the time of the bushfire and often involved in adult roles fighting fires and undertaking associated activities (i.e., greater exposure to and greater perception of threat). Accordingly, we addressed issues of implied consent. Consent was implied if surveys were completed and returned anonymously. We also included mechanisms to enable parents to give implied consent for participation of their children.

Data were obtained using a community survey designed to probe people's responses to the disaster, their stage in the recovery process, and their perspective on the strategies used in the whole-of-government approach to recovery.

The multidisciplinary research team brought together expertise from social work, mental health, communication, and government to develop the survey. Questions were designed to elicit information related to:

- (a) Non-identifying socio-demographic and bushfire incident-related information;
- (b) Community and individual recovery and resilience;
- (c) Mental health impact;
- (d) Government and community services; and
- (e) Government-community communication.

The survey included multi-item ratings and a number of open-ended response questions designed to provide brief personal narratives to enhance the findings. Where possible, standardised measures were incorporated into the survey, and questions were based on those used in population surveys to enable comparisons with epidemiological data. Care

was taken not to include questions that might be considered too intrusive for a community postal-survey or beyond the scope of issues relevant to the research.

The survey comprised 126 questions enabling respondents to provide quantitative and qualitative responses on a range of topics. Respondents were invited to report about:

- General information about their situation
- Their experiences on 18th January, 2003
- Their housing and living situation
- How things have been for them since the bushfire
- Recovery after the bushfire
- The help they received after the bushfire
- Their social contacts and resources
- Their current health and well-being
- Their children's health and well-being
- Community events attended
- Bushfire communication and the media
- Final comments

Prior to distribution, a *Pre-test and Expert Review* of the survey was undertaken. The team invited a panel of community members (of varying ages and gender), professionals working with the bushfire-affected community, and experts in bushfire research to provide their feedback and suggestions about the survey. They provided their comments about their own experience in completing the survey and their views on how others might respond to it. We provided the panel with a list of prompt questions to assist them with specific feedback and also encouraged verbal feedback on specific issues to the researcher who contacted them. Revisions were made to the survey according to the feedback and suggestions from the panel. The research team was aware that a questionnaire of 126 items over thirty pages was a major commitment for participants and indicates a reasonable level of literacy as well as patience. From the pre-testing we were able to indicate that the questionnaire would take approximately 40 to 70 minutes to complete depending on the respondent's answers to open-ended questions.

As indicated it was decided not to distribute the surveys until after the Canberra bushfire season. As a result surveys were not posted out until the beginning of April 2006.

Two copies of the survey were sent to each household and additional surveys were requested in response to newspaper advertisements. No comparison or control group was included in this project. The target group of interest were those likely to have been influenced by the impact of the 2003 bushfires and no comparisons were being made.

Surveys were sent out by the ACT Government's Bushfire Support Unit. Participation in the research was voluntary and as data collection involved anonymous responses to surveys (completion and return of the survey implying consent), a Consent Form was not used. Responses were returned anonymously in the reply-paid envelopes enclosed with surveys.

Five hundred and ten survey packs were returned. Data sets were obtained for 500 respondents as ten surveys were returned uncompleted. Twenty-five survey packs were returned with address unknown.

The quantitative data collected via the survey were analysed using descriptive statistics to describe the variables of interest. Due to missing information on various questions throughout some surveys, full data sets were not available for most analyses; as a result, varying numbers of responses and valid percentages are given through this report and this is demonstrated by the use of n where n is the number of respondents who answered that particular question. Qualitative responses to open-ended questions were analysed using a content analysis to determine key issues by categorising responses and identifying themes perceived as most relevant to respondents.

Survey research is becoming more problematic. Response rates have been falling over the last two decades (Minichiello et al, 2000). It is now generally expected that surveys have a response rate of between 30-35%. Increasing the response rate through further mail-outs is both very expensive and the law of diminishing return quickly kicks in (Minichiello et al, 2000). It is difficult to gauge the response rate for this survey as it

was sent to households. While two questionnaires were included in each pack it was rare to get two in the same households returning the survey.

Methodologists are concerned with survey design and response rate. It is of concern that response rates are falling (Minichiello et al, 2000). The vast majority who do not respond to surveys are unknown in their attitude and views. Claims of representativeness from such data sets become highly problematic.

Strand B: Interview Study

One hundred and thirty-seven survey respondents returned the Expression of Interest Sheet (last page of survey) separately to their surveys to indicate interest in being contacted about participation in the interview for Strand B. As no young people over 15 and under 18 years of age expressed an interest in participating in the interviews, parental/guardian consent was not necessary for Strand B.

Forty interviewees were selected according to key socio-demographic categories. The research team was overwhelmed by the number of respondents who wanted to be interviewed as part of this study. Forty were selected, as this was all that the research team's resources could stretch to. We were conscious that many people would be disappointed by not being selected and a personal letter was sent to those respondents'. It is hoped that the project can continue and that focus groups could be run for those respondents wishing to participate in the project, however this will depend on securing further funding.

This sample size enabled us to select a range of people of diverse ages and gender, who live in different locations, and have different family situations (i.e., with and without children aged between 4 and 17 living in their households). Each of the five interviewers (all experienced interviewers with clinical or communications backgrounds) conducted eight interviews. Respondents were grouped according to gender and age for stratified sampling over four age groups: 20 to 45; 46 to 55; 56 to 66; 65 and over. The oldest and youngest participants were selected. Rank ordering was used for allocation of interviewers, with each interviewer being allocated a male and a female from each age group. As indicated we were unable to interview everyone expressing an interest in being interviewed and a sample of interviewees was selected solely on the basis of obtaining equal numbers of males and females and a good

representation of ages, households with and without children and varying locations of current residence.

Face-to-face interviews were conducted to obtain descriptive accounts from interviewees. A total of 40 interviews were conducted in order to obtain a variety of opinions. Interviews were approximately one hour in duration and up to two hours where necessary. Participation in the interviews was completely voluntary and all interviewees provided written informed consent.

All interviews were conducted over a four-week period from mid-May to mid-June, 2006. Interviewing over a short period minimised the risk of participants being influenced by external events such as another natural disaster.

Interviews were conducted utilising a semi-structured interview schedule, however, interviewers asked different questions to pick up on issues raised by interviewees. Descriptive accounts were obtained about aspects of life since the bushfire and what interviewees perceived had helped or hindered them during this time, and what they would have found beneficial.

Interviews were focused around seven main topics:

- Pathways since the bushfire
- Personal well-being
- Social relationships
- Local neighbourhood and community
- Services received
- Media and communication
- Children (if relevant)

Each interview was audio-tape recorded with participants' consent and summary notes were taken by the researcher during and after the interview. The audio recordings were not transcribed but instead acted as an *aide de memoire* as necessary and to add further detail or richness to the summary notes. Each interviewer interviewed 8 participants. As noted these were all audio-taped though unfortunately 8 interviews for technical

reasons were not taped. The quality and depth of the interview data is such that the research team is endeavouring to secure further funding for the 32 tapes to be transcribed and analysed.

The interviews used the Interview Guide Approach, as describe by Patton (1990). Interviews were conducted using a semi-structured interview schedule, however, participants were asked differing questions, as the interview tone was conversational and informal. The interviews *flowed* and were adjusted to the issues participants wanted to cover.

The interview schedule was very detailed as this was primarily to help the team of interviewers work with a shared vision. The interview team met regularly over the four-week period to discuss questioning and participant responses. This assisted in increasing interviewer consistency and responsiveness to participants.

Data analysis was conducted from the summary notes. An initial analysis of data was obtained through agreement amongst the research team (n=7, 5 of whom were interviewers) in a lengthy discussion to arrive at a consensus of key categories from a shared understanding of the data. Data were coded and used to add richness/detail and to clarify issues identified from the survey responses. In-depth analysis of data was beyond the scope of this project, given the time constraints and the specific aim of the research and key deliverables in the context of this report.

Hearing from interviewees enabled us to have a much better understanding of the diversity of people's experiences over the last three years, and what has helped or hindered them over this time. Their accounts gave us a valuable insight into the lives of those affected by the fires and ways to support people following future bushfires and other disasters.

Ethical process and issues

The ACT Health and Community Human Research Ethics Committee, and the Australian Catholic University and University of Canberra Human Research Ethics Committees approved this research. We anticipated that, although participants may not directly benefit from the research, the findings from the research would benefit people

involved in future bushfires and other disasters. We hoped the report of the research would provide important insights that would enable various agencies to better plan for future services. Specific ethical implications relating to the following were addressed:

- Possible adverse or unforeseen events related to research on survivors of trauma and the associated procedures for managing, monitoring and reporting these;
- Inclusion of participants under the age of 18 years in Strand A; and
- Obtaining an expression of interest and consent for participation in Strand B of the research involving individual interviews and audio-taping.

We were aware of our ‘duty of care’ to participants and identified strategies for dealing with any adverse consequences of participation. Specific risk management/harm minimisation strategies were employed. Contact numbers were provided for support and assistance in the participant information and advertising. It was important that all the interviewers were experienced researchers and many had clinical experience in mental health practice. It was important to reassure interviewees that the interview could cease at any time of their choosing.

We recognised that some participants might have found that the research triggered them to recall distressing aspects of the fire and associated events. The risk was not considered to include significant discomfort and all efforts were made to minimise the likelihood of distress for the participant. We received some feedback that, while some of respondents found it taxing to complete the survey, they were pleased to have had the opportunity to participate. A few respondents stated that they preferred not to complete some questions, as they would have found it distressing to do so.

Chapter Three – The participants

Introduction

In Chapter Two it was noted that 510 survey packs were returned to the research team, however, ten were returned uncompleted. Data are provided on the 500 participants. In this chapter detail is provided on the demographic data of the participants such gender, age range, education, cultural background, household composition, employment, income and respondents' children. Data are provided on current and previous postcodes. Information is also provided on the recovery centre registrations. This provides the context for discussing the results of both the survey data and the in-depth interviews.

Who were the participants?

Almost three in five respondents were women (58.3%, n=285). 203 (41.5%) men completed the survey. Nearly two-thirds (59.7%, n=295) of respondents were aged between 46 and 65 years of age. Although 15 year olds were eligible to participate, very few (only 2, 0.4%) respondents were under 18 years of age. 22.7% were younger than 45 years of age with 9.7% (n=48) of respondents being between 18 and 35 years and 13.0% (n=64) were 36 to 45 years. 17.1% were in an older age group: 12.3% (n=61) were 66 to 75 years and 4.8% (n=24) respondents were aged 76 years and over. The following figure provides a visual representation of the data.

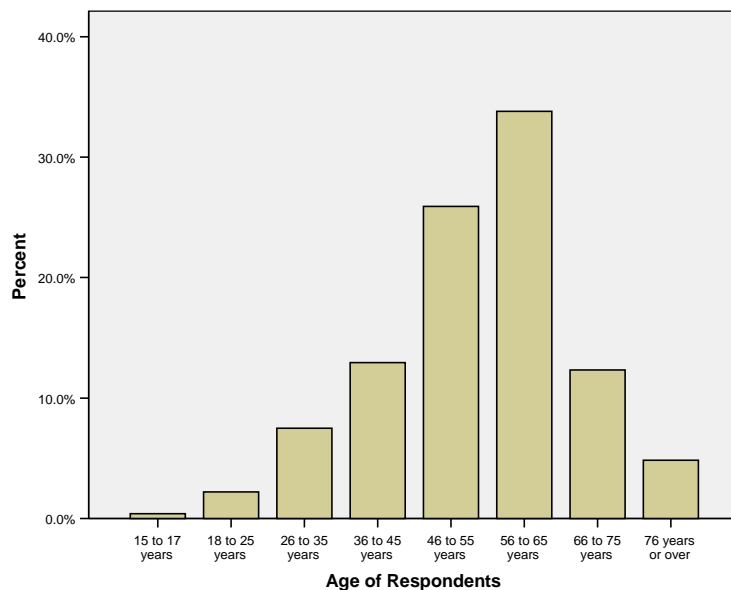


Figure 1 ***Ages of respondents***

Almost half the respondents (46.2%, n=228) had completed a university degree; 25.8% (n=100) had completed a Certificate or Diploma. 11.8% (n=58) had completed primary and secondary school to year 10; 9.9% (n=49) had completed Secondary School to year 12; 6.3% (n=31) classified their education in the 'other' category.

There were very few respondents of Aboriginal or Torres Strait Islander origin. Only 4 (0.8%) respondents were of Aboriginal and Torres Strait Islander origin. The numbers of Aboriginal and Torres Strait Islander people living in the affected suburbs is low (approximately 1% for Woden Valley and Weston Creek-Stromlo Districts) [Australian Bureau of Statistics, 2001 Census Basic Community Profiles and Snapshots]. The majority of respondents (94.1%, n=461) spoke only the English language at home.

Households tended to be small in size. The majority (42.9%, n=213) of respondents were from households that were comprised of 2 people. 13.3% (n=66) of respondents lived alone. 37.7% (n=187) were from households with 3 or 4 people; only 6.0% (n=30) were from households of 5 or more people. Approximately one-third (35.9%, n=178) of respondents were couples without dependent children. 4.0% (n=20) were parents on their own raising a dependent child/children; 25.0% (n=124) were couples with dependent children; 14.1% (n=70) were couples with adults or non-dependent children living at home; 7.7% (n=38) classified their households in the 'other' category.

De-identified data were obtained from the Recovery Centre records in order to estimate whether the survey respondents' size of household was representative of the size of potential participants' households (i.e., households receiving the surveys).

Consistent with the predominance of respondents from households comprising two people, this household composition (i.e., two-person) contributed to the greatest number of households registered at the Recovery Centre (33.3%). 26.1% of the households registered at the Recovery Centre were for registrants living alone. 29.7% were for households with 3 or 4 people; 10.6% were from households of five or more people.

Families were most likely to be couples without dependent children (35.9%, n=178) or couples with dependent children (25.0%, n=124). 13.9% were couples with adult or non-

dependent children living at home. Twenty respondents (4.0%) were sole parents. (See Figure 2)

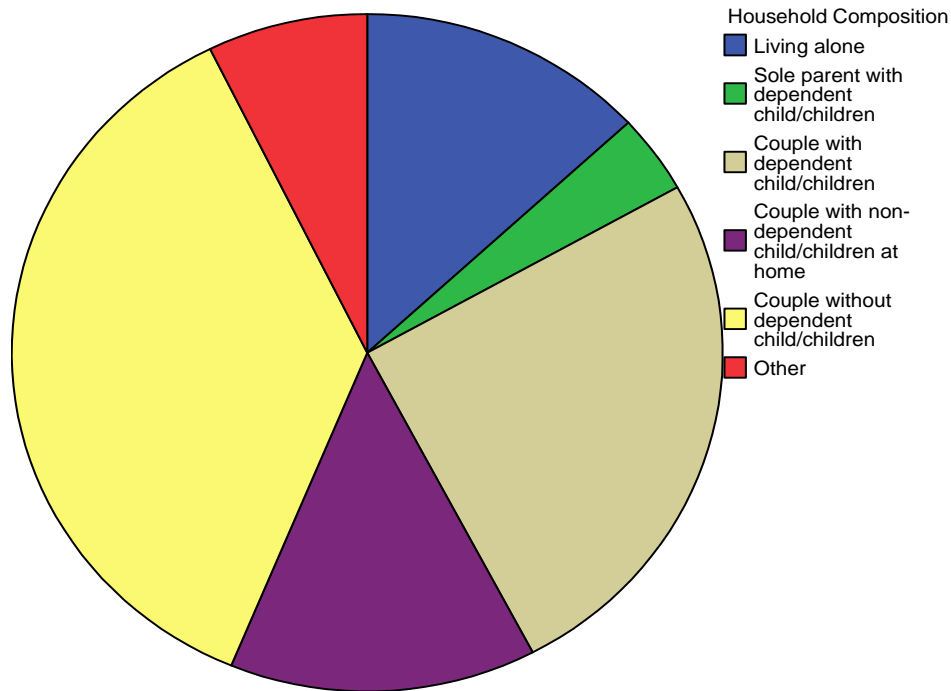


Figure 2 Household composition of respondents

Just over half (51.7%, n=252) the respondents were in full-time work. 13.3% (n=65) were in part-time work, six of whom were looking for full-time work. A third (33.5%, n=163) of respondents identified as not in the labour force. 1.2% (n=6) were unemployed and looking for work. A further two respondents identified themselves as self-employed.

The estimated annual family income was high for about half of respondents: 50.9% (n=239) earned over \$75,000. The estimated annual family income of just over one quarter of respondents was low: 28.7% (n=41) reported an estimated annual income of under \$20,000. A further 19.6% (n=92) reported between \$20,000 and \$49,999.

Respondents were asked to report about children aged 4 to 17 living with them in their household. Nearly one-fifth of respondents (23.4%, n=117) reported having one or more child aged 4 to 17 living with them in their household. Of these 55.5% (n=63) reported having 2 children, 12.8% (n=15) reported having 3 children, 4.0% (n=5) reported having 4 children, and none reported having 5 children. Respondents reported about similar numbers of boys and girls (boys: 51.0%, n=103; girls: 48.5%, n=97), and these averaged

12 years of age (mean, 11.95; standard deviation, 3.18; median, 12.00). Approximately one quarter were aged from 5 to 9 (24.0%), 10 to 12 (26.5%), 13 to 14 (24.5%), and 15 to 17 (25.0%). While together the respondents identified 200 children, this does not necessarily represent 200 different children. It is possible that two respondents may have reported about the same child living with them in their household; for example, two parents may report in separate surveys about the same child or children living in their household. It should be noted that because of the anonymity of the survey there be an over-reporting of children as respondents from the same household may have reported the same data on their children.

Just over three in five respondents (61%; n=309) currently lived in the 2611 postcode. This postcode includes the suburbs of Duffy, Chapman, Holder, Weston and Weston Creek, Rivett, Stromlo and Uriarra. While postcodes do not equate exactly to Statistical Local Areas most of these suburbs are in the Statistical Subdivision of Weston Creek-Stromlo. At the time of the bushfire over three quarters (77.5%, n=383) of respondents lived in the 2611 postcode.

Compared with the ACT or Australian profiles (ABS National Regional Profile), the demographic characteristics of the *Statistical Subdivision of Weston Creek-Stromlo* reveal a community that has a relatively:

- Large proportion of middle-aged persons (30.4% of population are aged between 45 and 64 years of age compared with 23.9% ACT, and 23.8% Australia; 36.8% of population 15 years and over are aged between 45 and 64 years of age - ABS National Regional Profile, 2003)
- Low rate of unemployment (3.4% compared with 4.3% ACT, and 6.2% Australia - ABS National Regional Profile, 2003)
- High average individual annual taxable income (\$43,932 compared with \$44,195 ACT, and \$39,285 Australia - ABS National Regional Profile, 2002)
- Low level of socio-economic disadvantage (Index of Relative Socio-Economic Advantage/Disadvantage decile of 10) (ABS 2001) [Note. A decile of 10 is the highest decile representing that the area falls within the group of Statistical Local Areas (SLAs) comprising the highest 10% of

SLAs in terms of its Index of Relative Socio-Economic
Advantage/Disadvantage]

The remainder of respondents came predominantly from three other postcode areas. 10.6% (n=53) currently lived in the 2902 postcode, or the suburb Kambah in the Statistical Subdivision of Tuggeranong. A similar proportion (11.1%, n=55) lived there at the time of the bushfire. A further six (1.2%) respondents also lived in this subdivision. 3.8% (n=19) currently lived in the 2605 postcode. This postcode includes the suburbs of Garran, Curtin, and Hughes in the Statistical Subdivision of Woden Valley. A similar proportion (3.2%, n=16) lived in the 2605 postcode at the time of the bushfire. A further eight (1.6%) respondents also lived in this subdivision. 3.0% (n=15) currently lived in the 2620 postcode. This postcode includes the suburbs of Hume (ACT), Tharwa (ACT), Queanbeyan (NSW), Oaks Estate (ACT), and Ridgeway (NSW). A similar proportion (2.4%, n=12) lived in the 2620 postcode at the time of the bushfire.

The great majority (84% n=416) of survey respondents owned their own home at the time of the bushfire and a small proportion rented private (5.3% n=26) or public housing (6.1% n=30). 43% of respondents (n=214) reported that their home was destroyed. At the time of writing, just under half of original owners have rebuilt or intend to rebuild on their block, and just over half have sold their block and moved elsewhere (ACTPLA 2006).

Recovery Centre data

De-identified data were obtained from the Recovery Centre records in order to estimate whether the ages of survey respondents was representative of potential participant's ages (i.e., bushfire-affected persons likely to reside in households receiving the surveys). The distribution of ages of 3012 persons registered with the Recovery Centre is shown below in Figure 3. Data in this graph are based on the ages on the database plus three years. Ages could not be obtained for an additional 992 persons due to errors in entering date and blanks. Numbers of 15 to 17 years olds could not be ascertained as they were grouped with 779 young persons aged 3 to 17 years. Almost half (49.4%) those registered with the Recovery Centre were aged 18 to 45 years compared with 22.8% of respondents in this age group (of the 492 respondents reporting their age as 18 and over).

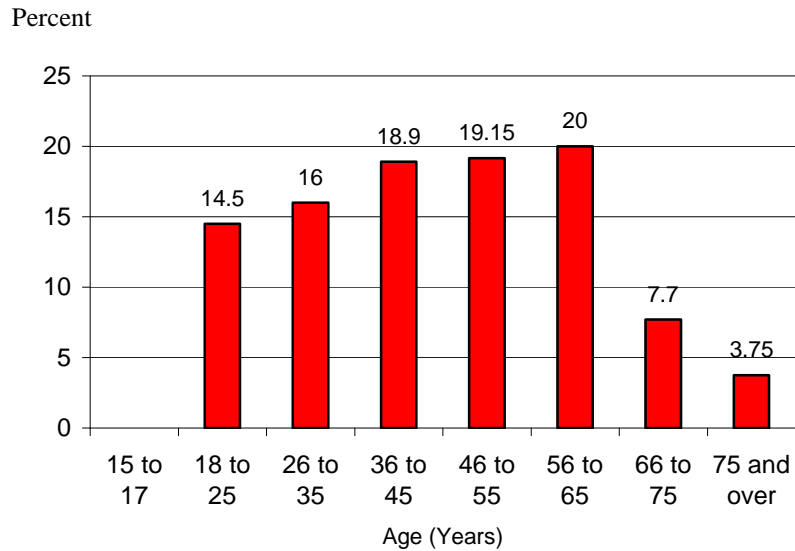


Figure 3 *Ages of persons registered with the Recovery Centre*

De-identified data were obtained from the Recovery Centre records in order to estimate whether the survey respondents' postcode at the time of the bushfire was representative of potential participant's postcodes (i.e., households receiving the surveys). Consistent with the predominance of survey respondents living in the 2611 postcode at the time of the bushfire, 78.8% of households registered at the Recovery Centre were from this single postcode. 12.5% were from postcode 2902, 2.6% from 2620, and 1.6% from 2605. A further 2.9% came from postcode 2606 (Chifley, Lyons, O'Malley, and Phillip), and 2.1 from a number of other miscellaneous postcodes.

Summary

Respondents to the survey were more likely to be women than men. Three women responded to the survey for every 2 men. Most respondents (60%) were middle-aged, that is between their mid-40 and 60's. However, compared with survey respondents, persons registered with the Recovery Centre were more than twice as likely to be in the younger age group of 18 to 45 years of age; that is, nearly 50% of persons registered with the Recovery Centre were aged between 18 and 45, compared with 23% of respondents. 10% of respondents were under 35 years of age. Nearly one in five (17%) were in their mid-sixties and over. Persons registered at the Recovery Centre were nearly three times as likely to be in the younger age range of 18–35 years (31%) than in their

mid-sixties and over (11%); whereas, there was the opposite trend with respondents to the survey (10% vs 17%).

The majority of respondents were highly educated: nearly half (46%) had completed a university degree and approximately one quarter (26%) had certificate level education. Just over one fifth (23%), however, had high school education or less. There were very few (0.8%) respondents of Aboriginal or Torres Strait Islander origin, which is consistent with the community profile from the 2001 Census for the predominant statistical subdivision.

Over three quarters (78%) of respondents were from the 2611 postcode. Recognising that postcodes and statistical subdivisions are not equivalent, the demographic characteristics of the dominant Statistical Subdivision reveal a community that is likely to have a relatively large proportion of middle-aged persons, a relatively low rate of unemployment, a relatively high income, and relatively low levels of socio-economic disadvantage.

It should be noted that 43% of the respondents reported that their home was destroyed in the fires. The total number of homes destroyed was 488 and 214 people whose homes were destroyed responded to the survey. This has important implications for the data as it indicates that those who experienced severe loss of property and many exposed to threat of life and injury wanted their 'voices' heard.

Just over half (52%) the respondents were in full-time work, approximately one-third (34%) were not in the labour force, and few (2%) were looking for work. The estimated annual family income was high (over \$75,000) for about half (51%) the respondents; however, just over one quarter (28%) had estimated annual family income of up to \$50,000.

The most common household size was two people (43%), which also contributed to most prevalent household size registered at the Recovery Centre (33%). Consistent with the prevalence of 2-person households, over one-third (36%) of respondents were couples without dependent children. 43.1% (n=214) of respondents had dependent or non-dependent children living with them (29% dependent; 14.1% non-dependent). 4.0%

were parents on their own raising dependent children. Three quarters of respondents (75.0%, n=372) identified themselves as living as a couple (i.e., presumably with a spouse present in the household).

Compared with respondents, Recovery Centre registrants were twice as likely to live alone (13% respondents versus 26% Recovery Centre registrants). Similar proportions of respondents and Recovery Centre registrants came from households comprising three or more people (44% respondents versus 40% Recovery Centre registrants). Half (50%) the respondents were couples with dependent children or adult/nondependent children living at home. Only 4% were sole parents.

Nearly one-fifth of respondents (23%) reported having one or more child aged 4 to 17 living with them in their household. While together the respondents identified 200 children, this does not necessarily represent 200 different children. Respondents reported about similar numbers of boys and girls with an average age 12 years.

This chapter has provided a profile of the participants. The next chapter explores the effects of the bushfire on the participants.

Chapter Four – Effects of the bushfire on participants

Introduction

As a context for understanding how recovery takes place, our research sought first to establish how people themselves perceived the effects of the bushfire on them and on their personal relationships and circumstances. To this end, participants in both the survey and the interviews were given the opportunity to make an assessment of how they believed the bushfire had affected various aspects of their lives including their housing and living situation, their overall health, their mental health and well-being, their work, their finances, their relationships with family, friends and neighbours, the well-being of their children, and their connection to their neighbourhood and local community. There were also opportunities to describe their personal well-being over the period since the bushfire and the extent to which they thought this was related to their experience of the fire.

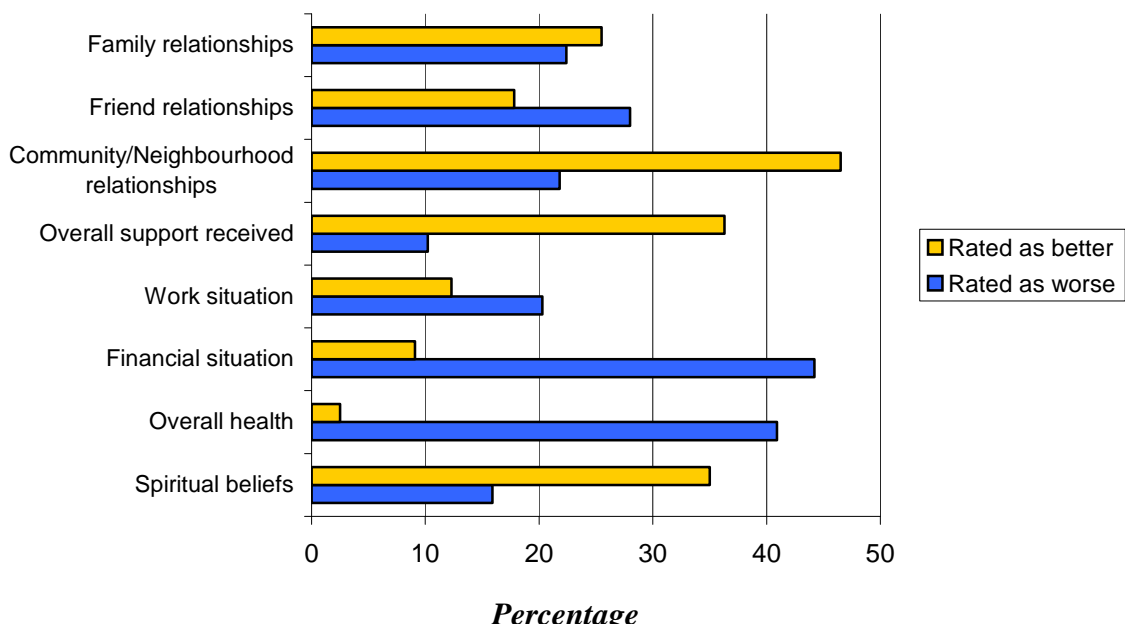


Figure 4 *Self-report of lasting positive and negative effects of the bushfire*

Figure 4 shows the likelihood of respondents perceiving a lasting effect positive or negative effect on different aspects of their lives. Perceived positive effects appeared to be most likely for community and neighbourhood relationships, overall support received, and spiritual beliefs. Perceived negative effects appeared to be most likely for relationships with friends, work situations, financial situation, and overall health.

In this chapter we will explore the housing and living situation of respondents, their work situation, financial situation, relationships with family including the well-being of children. Relationships beyond the family were also explored looking at friends and the neighbourhood. Finally the aspect of spiritual belief is also examined in this chapter.

Housing and living situation

As indicated more than 43% of respondents (214) reported their homes were destroyed. At the time of writing, just under half of original owners have rebuilt or intend to rebuild on their block, and just over half have sold their block and moved elsewhere (ACTPLA 2006). However not many respondents answered survey questions on the reasons for rebuilding or moving.

For those who have rebuilt, eighteen people wanted to recreate the family home, seventeen to maintain neighbourhood connections, twelve rebuilt for financial reasons and ten were for school and community connections. For those who chose not to rebuild, six people were unable or did not want to manage the task of rebuilding, five wanted a home more suited to their lifestyle, four wanted to move to another environment away from bushfire risk and one for financial reasons.

Qualitative comments in the survey and the interviews provide more insight into the complexity of factors that people took into account in coming to this decision. Financial issues (principally the outcome of insurance payments and rising building costs) were most mentioned as barriers to re-building. The key motivations to rebuild were the desires to recreate the family home and to return to a loved neighbourhood and community.

However many other issues came into play over the decision-making period, such as the views of other family members, changing relationships with neighbours, the physical and emotional effort that had to be put into rebuilding, dilemmas over design, negotiating through the planning process, and overcoming the tiredness and debilitation brought on by the disaster.

Insurance

Insurance was clearly one of the biggest issues that survey respondents wished to comment on. Although householders were invited to respond to an ASIC survey on insurance in 2004, and it was indicated therefore that insurance would not be covered in detail in this research, 174 respondents wrote a comment on insurance. These comments are summarised as follows.

Insurance cover was considered largely adequate where homes were damaged by the bushfire, but inadequate where the home was destroyed. 81% (n=168) of respondents considered insurance adequate in the case of damage to their homes. 69% (n=127) of respondents considered their insurance cover was inadequate where their home was destroyed.

Respondents' experiences with insurance companies ranged widely; some regarded their insurance companies as helpful, sympathetic and attentive; others experienced their assessors as unhelpful, unsympathetic and argumentative. Some said that they were not in emotional state to make the major decisions the companies insisted they make at the time. In some cases, comment on the same companies varied from very helpful to very unhelpful.

Many respondents commented about their distress that outdoor items were not covered by insurance e.g. sheds, garages, fences, gardens, removal of dead trees, sprinkler systems, paving, landscaping. Underinsurance was common; due to the rapid rise in house values before the fire, and the rise in building costs after the fire. Most respondents had underestimated contents insurance.

Over-insurance was also a stressor, and some respondents were penalised for this or had to argue their case strongly to get resolution. A number of respondents commented that they were not advised as to the extent they could claim, and got clarity only after asking many questions. Some respondents were clear that unsatisfactory insurance outcomes were a major issue in their decision not to rebuild.

One elderly male that we interviewed made the following observation on the importance of insurance:

Having insurance means that even though you have no control over natural disasters, at least you have control over what happens next.

Public and private tenants

Of the eighteen respondents in private tenancies who answered the questions about housing after the disaster, 22.2% (n=4) rented in the same neighbourhood, 38.9% (n= 7) rented elsewhere and two purchased elsewhere. 75% (n=12) of public housing tenants were allocated another government property, and 25% (n=4) chose to find private rental or alternative accommodation.

Settling in to a new home

Many households have moved a number of times since the disaster. 34% of respondents (n=131) have moved three times or more. 23 respondents (5.6%) have moved six times or more. It has been an enormous effort, but a high proportion (83% n= 347) of respondents are now satisfied or very satisfied with their current accommodation. The following comments from interviews and qualitative comments in the survey summarise the views people have of this journey.

Opportunity provided by adversity - People whose homes were destroyed reported taking advantage of the situation to improve design, size and homes to better suit their current requirements either in their rebuilding or deciding to purchase elsewhere in Canberra or even interstate:

In some ways the bushfire aided me in developing a more comfortable and desirable home. The house is better suited to my wife as it is all on the same level for a wheelchair. Good neighbourhood, comfortable house, new start.

Unresolved issues - Some people report having purchased in a rush in order to feel emotionally stable and are not satisfied now, whilst others are yet to finalise their

accommodation needs. Loss of friends and associations was reported as a consequence of moving to another area. Environment, finances and health were reported as impacting on respondents' status.

New house in same location but 10-15 years to get surrounding area (i.e. forests) and sense of community re-established'.

2 years to adapt once moved in due to depression, although accommodation suitable and long term.

Great new house but very stressful process and very expensive. The new rebuilt home allowed us to design a home that met our needs better than the house that burned down. However it cost more, so although we are happy with the home, we are now much more deeply in debt.

Loss of community or altered ambience - There is a common (albeit not universal) feeling of loss of community; changes associated with new arrivals in the neighbourhood; issues resulting from new or different aesthetics. A number of people whose homes were not destroyed reported that they have and still are living in an environment of dust, wind, noise, no trees and big houses overlooking them.

My house is (now) showing its age whilst nearly all the houses around me are brand new.

No sign of rebuilding on the next block of land – now or in the future- I feel unsafe. I miss my old neighbours.

I miss the companionship of the old street.

It is interesting to contrast this latter comment with the following:

I rebuilt elsewhere – feel secure that I'm not living next to Stromlo Forest and not reminded of the fires daily (if I had rebuilt in Duffy).

For one respondent, conflict with a 'prickly' neighbour in a dispute over a boundary fence was the final factor in them deciding not to rebuild on their block.

Rural people reported other issues.

I am waiting the rebuilding of the Stromlo Forestry settlement, so in a strange place i.e. I can't settle until this situation is resolved, it has been a long difficult process and one in, although I like where I am, I wish to return to the settlement. One has a feeling of being like a pot plant not been able to be planted... just yet.

Pierce's Creek respondents felt a small spark of hope in 2004 when it looked as though the village would be rebuilt, but have been very downcast since the announcement that this will not go ahead.

More than three years from the fires there are many people who have not 'settled' in both the physical sense as well as the metaphorical. For others it did offer an opportunity to redesign and make their housing situation to suit their current circumstances.

Work situation

Approximately two-thirds (66.9%) of the survey respondents indicated that the bushfire did not have a lasting effect on their work situation. 12.3% said the bushfire had a lasting effect for the better, while 20.3% said the bushfire had a lasting effect for the worse. There were a small number who indicated that their business or workplace had been destroyed by the fire. Only two respondents provided multiple responses to the question.

A number of people suggested in their interviews that one effect of the bushfire on their work situation had been that they experienced quite outstanding generosity and understanding from their work colleagues. Some took short to medium amounts of leave to attend to practical matters related to relocating or rebuilding. A couple of people commented that they had decided not to take any leave, believing that the routine of work would be helpful for their recovery, but realised later or were told by others that their work performance had suffered.

Financial situation

Approximately half (46.5%) the survey respondents indicated that the bushfire did not have a lasting effect financially. 9.1% said the bushfire had a lasting effect for the better; 44.2% said the bushfire had a lasting effect for the worse. Extra comments offered included that the respondent now has fewer savings but their new house is worth more than the one they lost. There was only one multiple response.

Not unexpectedly, comments in the interviews as well as survey responses made it clear that many of the financial difficulties people experienced were the result of insurance issues. Also, factors such as injury or ill-health resulting from the fire were mentioned by some interviewees as affecting their employment and reducing their income, even if only temporarily.

Relationships with family

Approximately half (50.8%) the 482 respondents to this question indicated that the bushfire did not have a lasting effect on their relationships with family. 25.5% said the bushfire had a lasting effect for the better; 22.4% said the bushfire had a lasting effect for the worse.

There were six multiple responses to the question, and extra comments offered about these responses included that their relationships with family initially got worse but then became better than before; that their relationships with some family members were better and with others were worse than before; and that relationships were different after the fire but not really better or worse.

This diversity of response was also obvious from the interviews we conducted. Many said that they felt the fire had in fact strengthened bonds between members of the family. In particular, a number of people who were interviewed commented that their relationship with their partner was strengthened by the experience of the fire and its aftermath. For example, several people suggested that one result of the fire had been the development within the relationship of stronger mutual respect for each other's capacity to deal with serious difficulties and stress. Others said that going through such difficulties together and surviving them had brought them closer. Conversely, one

woman felt that her marriage had been weakened by her husband's strong focus on replacing all their material possessions.

Another woman, who spoke of her continuing distress about many aspects of the fire, also commented that one positive from the whole experience had been that she now lived closer to her grandchildren and so was able to see them much more often. Others mentioned that the fire caused a family member to move further away with the result that they saw each other less often. Another person observed that his decision to work part-time so he could give more attention to the rebuilding of their house had also given him more time to spend with his teenage children.

There has also been a lasting impact on some families where one or more family members have experienced prolonged distress such as depression or anxiety. In some interviews, the person who him or herself experienced serious injury, trauma or distress expressed concern about the difficulties that this has caused for their partners and/or the rest of their family. In a couple of cases, the fire had a very negative effect on the family by compounding problems or difficulties that the family was already facing, such as serious ill health or work difficulties. One woman described the impact of depression following the fires:

My relationship with my husband got adrift, partly because we both had patches of quite bad depression. Recently, we have got a lot more focused and try to do things together. The relationship is different now and probably stronger because it's been through so much drama, but we'd rather it hadn't had to do that.

One person interviewed told of a major and rather frightening family fight about a week after the fire, which they saw as the result of the stress of the whole experience, but also said that after the fight, everyone settled back to being very close and supportive. Another woman commented on the strong emotions that developed in her family, particularly related to differing experiences on the day. For example, one son had lingering feelings of guilt and helplessness about not having been there to help on the day while her daughter, who had also not been there, found herself completely unable to help relieve her mother's intense distress in the days and weeks after the fire.

Well-being of children

Survey respondents indicated whether they thought any of their children aged between 4 and 17 years of age and living with them in their households had been affected by any difficulties over the last six months that were related to their experiences of the bushfire. Although respondents were given the option of stating they were unsure as to whether a child had experienced such difficulties in this time frame, options were combined to give binary responses of yes/no to indicate presence or absence of perceived bushfire-related difficulties.

For one woman we interviewed, her key motivation for participating in the study was to make sure her children's experience was heard. As she commented:

I'm doing this because of my children...everything was because of the children, seeing how hurt they were and how hard it was for them.

Just over one-quarter (28.2%, n=33) of the 117 respondents with children (aged 4 to 17 years) living in their households reported that one or more child had difficulties over the last six months that they thought were related to his/her experience of the bushfire. Some respondents reported more than one child with bushfire-related difficulties over the last six months. Nine respondents reported that they had two children living with them who had these difficulties. As previously mentioned respondents reported about 200 children, which does not necessarily represent 200 different or unique children. It is possible that two respondents may have reported about the same child living with them in their household; for example, two parents might have reported in separate surveys about the same child or children living with them. This was one of the limitations of a survey method where data were collected anonymously from one or more respondents from the same house. This methodological limitability needs to be considered in the light of current evidence. There is however, a dearth of studies investigating either medium-or long-term outcomes for children. Six and eight month studies have been conducted for children and adolescents exposed to Australian bushfires (McDermott et al 2005; McDermott & Palmer 2002; McFarlane 2987). To date published natural disaster research on children and adolescents has been within 2 to 24 months post disaster (McDermott, 2004). Studies have focussed on children/adolescents or adults separately,

rather than together. As ‘parental distress is a strong, and sometimes even the strongest, predictor of their children’s distress that has been replicated in a number of studies’ (Norris et al 2002a:237), it is important to examine children/adolescents and their parents together in the same study. While we do not know how many individual children experienced bushfire-related problems, we do know that 33 respondents thought at least one of their children had recently experienced these difficulties.

Of the 200 children identified by 117 respondents, approximately one-fifth (21%, n=42) of the 200 children were thought to have had recent bushfire-related difficulties. Of these, 61.9% (n=26) of were girls and 38.1% (n=16) were boys.

Respondents rated the degree to which they thought a child’s difficulties were related to the bushfire. Problems were identified as related ‘a medium amount’ for 51.2% (n=21) and ‘a great deal’ for 39.0% (n=16) of respondents.

Respondents reported that the majority of children with emotional/behavioural problems (85.7%, n=36) had experienced these difficulties only since the bushfire. Respondents reported 14.3% (n=6) of children as having difficulties that were present before the bushfire but that became worse afterwards. Ages of the 42 children identified by respondents thought to have had recent bushfire-related difficulties are shown in Figure 5.

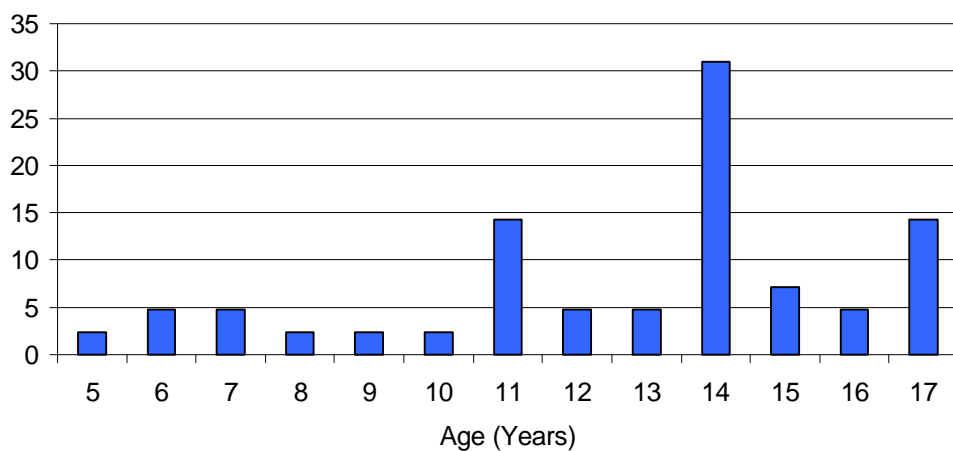


Figure 5 *Ages of the children respondents identified as having recent bushfire-related difficulties*

The average age of these children was approximately 12 years of age (mean, 12.74; standard deviation, 3.30). Almost one-third (31.0%, n=13) of the children identified by respondents were currently 14 years old. These children would have been 11 years old at the time of the bushfire. As shown in Figure 5, 11 and 17 (8 and 14 at the time of the bushfire) year-olds were also commonly identified by respondents. It is possible the prevalence of 11, 14, and 17 year-olds identified as having bushfire-related difficulties, is due to the prevalence of these ages in the overall sample of 200. As shown in Figure 5, the respondents most commonly reported having 14 and 17 year-olds living with them in their households.

We know that 33 of 117 survey respondents were concerned about one or more children now aged 4 to 17 living in their households. We are unable to determine the exact proportion of children from the sample of respondents with bushfire-related problems. However, it is likely to be less than 21% given the possibility that the same child is nominated more than once. Epidemiological data suggest that parents would report recent emotional and behavioural difficulties in approximately 31% of children and that these difficulties might be more prevalent in an older sample.

Parent and carer-reported data from the NSW Child Health Survey 2001 found almost one third (31.4%) of children aged 4 to 12 years to have had 'any emotional or behavioural difficulties in the past six months, both clinical and non-clinical' and 11.8% as needing professional help for such problems (CEHR 2002:43). Problems were more prevalent in older children than younger children.

However, parent-reported problems are likely to be related to a range of causal factors. The survey did not specifically ask respondents to report on whether they thought the children had any difficulties over the last six months that were unrelated to the bushfire as it was considered outside the boundaries of the research project. If survey respondents had reported about any of their children's behavioural and emotional difficulties (that is, both bushfire-related and unrelated) the percentage would be expected to be considerably higher than 21%. In the context of epidemiological data, the available evidence suggests that a reasonably large proportion of children are still experiencing difficulties related to the 2003 Canberra bushfire.

It is possible that the high prevalence of current 14 year-olds was due to the large numbers of young people of this age living with survey respondents. However, it is important to consider the ages of children at the time of the bushfire. Previous research with Canberra children shows that post disaster psychological problems six months after the 2003 bushfire were related to the child's age and level of exposure to loss and perceived threat. In the next chapter this is explored in more detail within the context of health.

Relationship with friends

Approximately half (52.8%) the survey respondents indicated that the bushfire did not have a lasting effect on their relationships with friends. 28% said the bushfire had a lasting effect for the better; 17.8% said the bushfire had a lasting effect for the worse, while 1.5% reported multiple responses to the question. Again, multiple responses were usually explained in terms of improvements in some relationships but deterioration in others. One of the men we interviewed made the following comment the fire's impact on some of his friendships:

With friends there has been a tendency to distance because we didn't move back into the area. Some thought that people who left let down the ship and deserted the community...it has been detrimental to some friendships to move away. There have been losses and they have been greater than the gains. We keep visiting and endeavouring to keep up the links.

Many of the people who were interviewed spoke of the deepening and strengthening of friendships, and of receiving 'magnificent' support and generosity. In some cases the fire led to significant new friendships but also in some cases to losing relationships with people they had previously considered friends. As one person commented:

It sounds like a real cliché but you don't know who your friends are until something like this happens. There are people you expect will help who don't and people you expect won't help who do. Some of our former friends we haven't seen since the fire.

Relationships with neighbours and others in the community

Approximately half (46.5%) the survey respondents indicated that the bushfire had a positive and lasting effect on their relationships with neighbours and others in their community, while 30.5% said there had not been a lasting effect. 21.8% said the bushfire had a lasting effect for the worse. 1.2% reported multiple responses to the question. 'Other' comments offered in response to this question usually mentioned that relationships with neighbours had changed simply because either the respondents or their neighbours had moved elsewhere as a result of the bushfire.

Almost everyone who was interviewed commented on at least some aspects of the way the fire affected their relations with neighbours and their sense of comfort and belonging in their neighbourhood or community, and had usually had at least some positive experiences with neighbours in the aftermath of the fire. One frequent comment was that they now knew their neighbours better than before and/or that they have socialised more often since the fire. This appeared to relate to having 'been through hell together', to having shared the horror and fear of the day itself, as well as to feeling more comfortable in the period after the fire with people who understood what they had been through. People who felt this kind of bond with neighbours generally considered it had been very important and helpful in both practical and emotional ways. For some, it was a crucial factor in deciding to stay in the suburb after the fire:

Part of why I wanted to go back was the lovely community.

It is clear from responses at interview, however, that the fire also had negative effects on this part of people's lives. For example, a number of the interviews showed that significant tension developed between neighbours about many aspects of rebuilding such as fences/boundaries and the design, siting and size of rebuilt houses. Several spoke of the loss of privacy and amenity in their homes that was partly due to larger houses now overlooking theirs and partly to the loss of trees and shrubbery. This dramatic change in the physical environment within localities has been accompanied by other types of change, including the demographics, type of resident, and the 'feel' of the place. The following comments illustrate this:

You have people who weren't there and may not even be Canberra people who have come into the suburb and they don't know what's happened ... A lot of the houses that have been rebuilt have been sold and people have moved on so, particularly around Duffy, people aren't too sure if their old community is still there. It's a community in transition.

The community broke up. So many houses were gone. Our lovely little community lost its soul, lost its spirit. Although particular friendships are very much strengthened, the community is gone.

Through her involvement as a volunteer at a retirement village that was threatened during the fire, one woman spoke of the negative impact on the village residents, many of whom were from other countries and had limited English. She described them as 'more frightened and more reticent than before', as having 'gone back into their shells', although she also commented that more recently, they have organised more get-togethers for the group and this has been helpful.

Some of those interviewed spoke of other sometimes less obvious divisions that they nevertheless felt keenly. For example, some people whose houses were not destroyed spoke of a feeling of 'them and us' between people who lost their houses and those who didn't. In other cases, tension and resentment developed between neighbours about whether people 'stayed to fight' on the day. Some who stayed were angry that others had left or were evacuated and a small number even felt that their own houses may not have been destroyed/damaged if only more neighbours had remained with their houses. This is despite the fact that many were either told to evacuate (e.g. by police) or fled in fear for their lives, and staying with their houses had not been an option.

In the several rural communities affected by the fire, the impact was also mixed. In the ex-forestry villages, the pre-existing sense of community and closeness was very strong and appears to have been reinforced to some extent by their shared commitment to fighting for their communities to be rebuilt. At the same time, the geographical scattering of the communities that occurred as residents were relocated across Canberra has made it hard for them to maintain contact. Responses in both the survey and the

interviews suggest that people in rural communities experienced the loss of their whole rural lifestyle and community as well as losing their homes and possessions. Their sense of dislocation living in suburban houses away from all their old contacts was made stronger by a long delay in the decisions about whether their villages would be re-established; and for some individuals, their physical separation from their neighbours and friends meant limited opportunities to talk through what had happened to them. As one ex-rural person commented,

There's a lot of unresolved trauma out there!

Spiritual belief or belief in humanity

Almost half (49.1%) of respondents to the survey indicated that the bushfire did not have a lasting effect on their spiritual beliefs or on their belief in humanity. Just over a third (35%) reported that their beliefs were stronger than before while 15.9% said that their beliefs were weaker than before. In interviews, there were comments from several about the impact of the fire on their view of life or their belief in humanity. For some, this was a reinforcement of their religious faith:

We are Christians and prayer was important to us. The Holy Spirit looked over us and kept us calm.

For others, one very positive effect of the fire was a strengthening of their belief in the generosity and kindness of others. We have mentioned this above in the context of how the fire affected relationships with family and friends, but it was also evident in the actions of people they hardly knew or even from strangers, and in the 'random acts of kindness' that were shown to them in all kinds of situations. This is just one example:

A channel 9 cameraman was in the street. He came over to me and asked if he could get a couple of shots of the NRMA in the street near where our house had been. Afterwards I went to him and asked him if he would mind taking some photos of the bits of pottery and jewellery we had found in the rubble. He did that and went around with me filming bits of [the remains of our property]. He really helped. He made a separate copy for me and the next day it was at the studio all

labelled and ready for me to pick up. It was really nice to find someone who genuinely connected with what had happened to us.

This chapter has focused on the changes both positive and negative that occurred in participants' lives since the bushfires. In the next chapter we explore the health effects as reported by participants.

Chapter Five – The health and well-being of participants

Introduction

Recovery from a traumatic event such as a bushfire has important implications for health care. As noted in Chapter One, 3 people were treated for serious burns at the Royal North Shore Hospital, 49 people admitted to ACT hospitals and 440 people received outpatient care. This represented the direct result of the bushfires, though of course many more people would have been treated by the local GP's for a range of minor ailments from sprained limbs, small burns to chest complaints. There are however, a range of health related problems that 'victims' of disaster experience after the event. In this Chapter we explore participant's experience of their well-being three years after the fires.

Loss and well-being

Severity of exposure to disaster (that is, threat to life, injury, and extreme loss) is one of the most important factors predicting adverse outcomes (Norris et al 2002a). As the number of disaster-related losses and threats increase, there is increased likelihood of psychological distress. Injury and threat to life were the strongest predictors of long-term adverse consequences, in particular post-traumatic stress symptoms.

Respondents reported on a range of stressor and losses they experienced as a result of the bushfire. Information from the survey was grouped according to nine risk factors identified by Norris (Norris et al 2002a; Norris & Kaniasty, 1992):

- Perceived threat for self and significant others (fearful might die or be injured)
- Bereavement (death of significant other)
- Major injury to self
- Death or injury to pets
- Loss of dwelling (loss of house)
- Damage to dwelling (damage to house)
- Property loss (damage to garden, trees, crops, stock, garage, fences, pool)
- Personal loss (loss of personal or sentimental belongings)

- Financial loss (perceived lasting, negative effect on financial situation)
- Displacement (structural damage to dwelling and move house three or more times in three years)
- Separation (separated from people normally live with at time of disaster)
- Neighbourhood loss (damage to neighbouring houses or workplace)

The prevalence of each of these is illustrated in Figure 6 and discussed below.

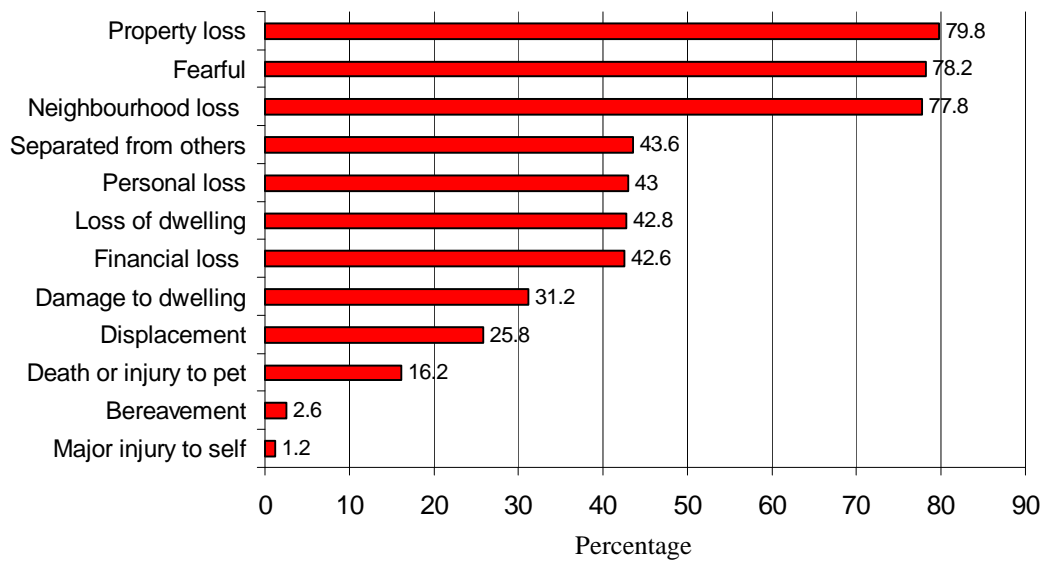


Figure 6 *Prevalence of fire-related losses and stressors*

78.2% reported a perceived threat for self and significant others (fearful might die or be injured): 60% feared they themselves might be killed or suffer serious injury; 72.4% feared the same for a family member or close friend. 73.8% reported structural loss or damage to dwellings. Houses of 42.8% (n=214) were destroyed; Houses of 31.2% (n=156) were damaged. While we refer to houses, the researchers are aware that they are not ‘houses’ but ‘homes’ (as commented by some survey respondents). Six (1.2%) respondents received major injuries; 17.6% (n=88) received minor injuries. Thirteen (2.6%) respondents had a family member or close friend die as a result of the bushfire.

The effect on respondents’ neighbourhoods in terms of damage to the surrounding houses and their workplaces was extensive. This form of neighbourhood loss was reported by 77.8% (n=389). Neighbouring houses were damaged or destroyed for 74.2%; business or workplaces were significantly damaged or destroyed for 11.6%. Loss of personal or sentimental belongings was reported by 43.0% (n=215). 42.6% (n=213)

perceived the bushfire to have a lasting and negative effect on their financial situation. 25.8% (n=125) were displaced in terms of having structural damage to their dwelling (either destroyed or damaged) and moving house 3 or more times in 3 years. At the time of the bushfire, 43.6% (n=218) were separated from some or all of the people with whom they normally live. 77.0% (n=385) reported their garden or trees were damaged or destroyed. 16.2% (n=81) reported the death or injury of pets. 6.8% (n=34) reported losses of crops or stock.

A count of the number of bushfire-related losses and threats provided an index of severity of exposure. A possible total of twelve losses included perceived threat for self and significant others, bereavement, major injury to self, death or injury to pets, loss of dwelling, damage to dwelling, property loss, personal loss, financial loss, displacement, separation, and neighbourhood loss. The average number of fire-related losses and stressors ranged from one to ten per respondent.

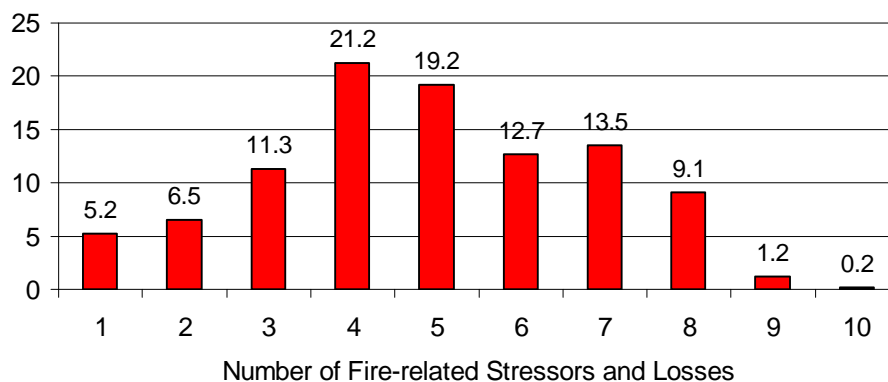


Figure 7 *Number of fire-related losses and stressors*

The profile of participants in terms of their demographic characteristics and the extent of their disaster-related exposure and losses is likely to influence their mental health and psychosocial outcomes. A number of factors that are present either at the time of the bushfire and or during/following the bushfire have been identified as risk and protective factors that work together to either increase or reduce the likelihood of an adverse outcome for the individual. In one of the most extensive reviews of the research of disaster samples, Norris and colleagues (Norris et al 2002a; Norris et al 2002b) identified a number of such factors.

One of the most important factors associated with adverse outcome is severity of exposure to the disaster (in particular injury, perceived threat to life) and disaster-related losses. Specific stressors that have been found to affect mental health include bereavement, injury to self or family member, life threat, panic during the disaster, horror, property damage or financial loss, and relocation. Studies that had variability on many of these stressors often found injury and threat to life to have a stronger or lasting consequences for mental health. (Norris et al 2002a:225).

In general, these review findings are supported by the body of evidence regarding the mental health outcomes documented in disaster studies of Australian bushfires (Ash Wednesday bushfires, 1983; Sutherland bushfire, 1994; Canberra bushfire, 2003 and the Newcastle earthquake 1989). The extent to which people's lives are disrupted by disaster and their perception of threat are particularly important 'vulnerability' factors that explain psychological distress and vulnerability' (McFarlane et al 1997:266). Two key issues emerge:

- Although post-disaster morbidity is likely to decline over time, the effects of the initial disaster exposure and losses are likely to persist.
- The greater the disaster-related exposure and losses (that is, 'threat events' such as injury, fear of injury or loss of life; 'disruption events' such as loss or damage to home or business or displacement) the greater is the likelihood of psychological morbidity (Carr et al 1997a; Carr et al 1997b; McFarlane et al 1997).

A number of pre-disaster psychosocial factors also likely to influence ongoing psychological morbidity were not measured in the community survey due to the need to limit its intrusiveness. As a result data were not obtained for the possible risk factors of past history of emotional problems or traumatic experiences, personality disposition, or coping strategies as described by Carr et al (1997a; 1997b) and Parslow et al (2005). While a number of these pre-disaster risk factors have been found to predict psychological morbidity, the influences of exposure and loss-related risk factors have been found to be present after taking pre-disaster risk factors into account (Carr et al 1997b; Parslow et al 2005).

Specific socio-demographic risk factors relevant to the characteristics of survey respondents include:

- Being female
- For adults – being aged in the middle years of 40 to 60
- Having children living in the household
- Having a spouse present, especially for women
- For children - being aged approximately 10, 11, or 12 years
- Having distressed parents
- Being disadvantaged socio-economically or experiencing poverty
- Being a member of an ethnic minority group

It is possible that the predominance of women, persons in the middle years between 46 to 65 years, and couples would increase the likelihood of negative effects from the bushfire in the survey sample. However, the overall low level of socio-economic disadvantage of the sample and apparent relative absence of respondents from ethnic minority groups is likely to contribute to more positive outcomes.

Health and well-being

Survey respondents' self-reported health status was measured using two items from the SF-12 health survey that is widely used in population studies (Sanderson & Andrews 2002; Ware et al 1996). Approximately three quarters of respondents reported their overall health as good or better (74.8%, n=371).

- 42.5% (n=211) of respondents identified their overall health to be *very good* or *excellent*
- 25.2% (n=125) considered themselves to be in *fair* or *poor* health; of these, 6.7% (n=33) in *poor* health

This section compares epidemiological data and survey data on overall health. The 2004-05 National Health Survey (NHS) (ABS 2006) results for those considering themselves to be in either *very good* or *excellent health* are:

- 56.0% of Australians (15 years and over);

- 60.3% of ACT residents (18-64 years); and
- 35.7% of ACT residents (65 years and over).

Variation is to be expected between the health documented for the current sample and the NHS, as the proportion of people reporting very good or excellent health is likely to reduce with age as found in NHS self assessments of health status (ABS 2006). Accordingly, the ABS percentages are age standardised.

In the current sample, over three quarters (76.9%, n=484) were aged 46 years or over. However, only 2.6% of the current sample of respondents were 25 years of age or under. Three quarters of respondents (74.8%, n=371) considered themselves to be in *good health or better*.

The 2004-05 NHS results for *fair or poor health* are:

- 15.7% of Australians (15 years and over);
- 11.3% of ACT residents (18-64 years); and
- 34.4% of ACT residents (65 years and over) (ABS 2006).

The National estimate for poor health in Australians aged 15 years and over is 4.4%.

Again, variation is to be expected between the health documented for the current sample and the ABS NHS, as the proportion of people reporting poor health is likely to increase with age as found in the ABS NHS self assessments of health status (ABS 2006). For example the NHS proportions with poor self-reported health status increased from 1.8% for 25 – 54 year olds to 7.6% for 55 to 64 year olds.

Over half the survey respondents (56.4%, n=272) indicated that the bushfire did not have a lasting effect on their overall health, while 2.5% (or 12 respondents) reported that their overall health was better than before. In comparison, 40.9% (n=197) of the survey respondents reported a lasting negative effect of the bushfire on their overall health.

Over two thirds (68.8%, n=22) of the 33 respondents who reported that their current overall health was *poor* (on the SF12 general-health question) reported that the bushfire had a lasting effect on their health, with their health currently not as good as before the

bushfire. Survey respondents also indicated whether they, or someone close to them, had experienced specific health-related problems during the last 12 months, which they thought were either *somewhat* or *greatly* related to the bushfire (Q. 42).

The prevalence of specific health-related problems experienced between two and three years post-bushfire were:

- Alcohol/drug problems 10.5% (n=48)
- Serious disability 03.8% (n=17)
- Mental illness/emotional crisis 28.6% (n=134)
- Death of significant other 03.1% (n=14)
- Serious accident 02.2% (n=10)
- Serious illness 10.6% (n=49)

In an open-response question in the survey (Q. 41) many respondents took the opportunity to give details of the effects they perceived the bushfire had on their health. Brief comments were given in the short-answer response format for this question. Most of these comments related to perceived negative effects on the physical and/or mental health of themselves and their families; however, some related to positive effects. Responses were grouped according to categories of:

- Negative effects on own health and well-being
- Perceived impact on illnesses of self and significant others
- Perceived effect of multiple losses compounding pre-existing health problems
- Positive effects on own health and well-being

Negative effects on own health and well-being

A number of people described feeling more anxious and nervous, less optimistic or depressed; having a pervasive sadness or insecurity, a loss of *joi de vivre*, or a loss of optimism; experiencing post-traumatic stress, being more reactive to stress, feeling resentment and anger or having difficulty dealing with loss and grief. They also identified:

- A negative outlook on life; bitterness; cynical and sceptical
- A pervasive sadness has overtaken our lives
- Loneliness and depression continuing
- Having since developed a ‘couldn’t care’ attitude
- Their health had deteriorated significantly because of overwhelming stress and little support.
- They could never be carefree again after losing everything. Life is now more serious.
- They have gone from being happy helpful and trusting to one who is very bitter believes nothing they are told and trusts no one.
- Feeling more anxious, nervous than before.

Physical and emotional anxiety, which permeates work and pleasure opportunities

The emotional scarring; one’s threshold levels for tolerating pressure and stress are much reduced. A number of respondents described feeling at-risk or on-guard when faced with reminders of bushfires (such as fire and smoke):

I live with fear of fire, in burning off times I have become frozen with fear. I have at times been willing to flee out of fear.

I am fearful it might happen again. I get very anxious when I detect smoke (e.g., back burning) since the firestorm. I don’t think I will ever get over this anxious feeling.

*People don’t understand my fears of the next bushfire.
I am wary and sensitive to/of smoke and fire.*

I have developed a phobia with the ‘smell of smoke’ or anything burning – day or night must investigate source of smell of smoke.

My memories of the burnt property, burnt animals are unpleasant. As a volunteer fire fighter large fires bring back memory of the day and days after the 18th January.

Respondents also described feeling concerned when the weather conditions were reminiscent of those at the time of the bushfire or potential bushfires:

Every summer I am on edge, particularly during windy days.

Worried about hot, windy days, and smoke or red skies.

Hot, northerly winds still cause anguish. People forget (especially the Government) we had two bushfires in 13 months.

High fire-risk days, hot winds seem more potentially scary.

Fearful of smoke in summer.

Since the bushfire, I am worried every summer, in case there is another bushfire, which could destroy my home.

Some respondents described feeling less safe and secure and the effect of the bushfire on their own or their families' avoidance behaviour (i.e., efforts to avoid activities which arouse recollections of the trauma associated with the bushfire):

Fear of leaving the house for too long.

I don't want to go away or travel in bushfire season.

I fear having my child at someone else's house over night. I cannot do it.

Bushfires had a lasting effect on children and one has concerns whenever any of us are away for work, school camps, etc. He/she's also not interested in going on holiday or being away from home.

*Ultimately, the loss of safety/security associated with living in one's home.
Will it happen again? Will the response be the same as last time?*

Similarly, a number of respondents described their diminished interest or participation in activities they previously enjoyed. This was especially so when it was related to the change in the physical environment since the bushfire.

I used to love to cook (and bake) – since the fire my husband has done most of the cooking – I have no interest or motivation. I spend many hours at work – then I don't think about the loss.

We used to walk in the forest for exercise, which we can do no longer. I used to walk around the suburb for exercise but I don't anymore. No one wants to walk around a building site.

*The freedom to bushwalk and escape urban environment had been destroyed and in 3 years we still feel the gloom of the destroyed forests.
Our horse riding/competing lifestyle was destroyed. The horses got respiratory problems and we retired them. We did not return to the agistment property and have not ridden since.*

We enjoyed the walks and peace of the forest areas – a loss. We were proud of our little house and garden and it is difficult to re-establish that pride and satisfaction.

My pine forest has gone for the time being – this was a spiritual environment I enjoy.

Several people felt their illnesses, or those of their family member, were related to the bushfire:

My husband died of cancer [a couple of] years after the fires. I can't help but think that maybe the stress of the fires caused or brought on his early death.

I was diagnosed with cancer. As there is no history of cancer in my family, the oncologist cannot say what caused it.

The stress affected my mother and exacerbated her cancer. She died shortly after the bushfires, which affected and still affects the whole family.

Perceived effect of multiple losses compounding pre-existing health problems

Others found multiple losses particularly stressful or that the bushfire compounded pre-existing health problems:

My husband died unexpectedly [a couple of] months later. I found the impact of the devastation of the bushfire (which I have to drive past whenever I leave the suburb) made [this loss even worse].... Even though I was less directly affected by the bushfires than some, the compounding effect of two losses in a short space of time was severe.

My health was poor before the fires and I was advised to cut back at work. Unfortunately the financial burdens have increased and I now need to increase my workload and plan to work for longer period.

Positive effects on health & wellbeing

While many identified negative effects on their health, some described positive effects on them emotionally or benefits from dealing with health-related adversity:

I suppose my self-esteem in reaction to coping with disasters has risen and is in line with how I had hoped I would cope emotionally.

Better outlook on life and a more understanding of fires.

As a result of a period of hospitalisation I was able to undertake a PTSD course, which benefited me greatly. I am a very grateful person.

There is still some [post-traumatic stress] associated with [the bushfire] if I am confronted with graphic reminders or forced to think about it. I believe I grew and developed as a result of it – an interesting experience.

Suffered ill health before fire [cancer]. Fire allowed me to refocus on family and friends.

Interestingly, very few survey respondents or interviewees discussed problems with alcohol or other drugs. This is surprising given that one in ten survey respondents indicated that during the last 12 months they, or someone close to them, had experienced alcohol/drug problems, which they thought were somewhat or greatly related to the bushfire. Research evidence suggests that ‘alcohol consumption may increase the most in persons who were already problem drinkers or who developed other psychological disorders’ (Norris, 2005:3). Increased drinking post-disaster can be a means of bunting painful memories or ‘self-medicating’.

Some of these reflections on the negative effects on respondent’s health and well-being are consistent with symptoms of post-traumatic stress, anxiety, or depression. A number of respondents described intrusive symptoms (e.g., where memories of the bushfire event can be triggered by exposure to fire-related observations and images and can be experienced as ‘flashback experiences’), avoidance symptoms (e.g., avoidance of situations or activities that are reminders of the event; disinterest or reduced participation in significant activities), and arousal symptoms (e.g., feeling jumpy or on guard, feeling irritable or angry). These symptoms are not necessarily indicative of an ongoing mental health problem or functional impairment. They can arise occasionally in response to environmental stimuli and as previously mentioned, symptoms may settle over time and most people recover from without formal interventions.

Mental health and well-being

A number of Australian studies have shown that bushfires increase psychological morbidity among individuals and communities experiencing loss (McFarlane & Raphael 1984; McFarlane et al 1997, McDermott et al., 2005). These effects can be chronic and delayed, and may require ongoing intervention (Coghlan 2004). However, the individual and community responses to natural disasters, such as bushfires, are likely to vary and many people do not experience negative effects (Gordon 2004; NSW Institute of Psychiatry and Centre for Mental Health 2000).

Symptoms of post-traumatic stress are a common response to threatening experiences and may not depict a serious disorder. People affected by disasters often experience feelings of fear, sadness, guilt, or anger. Post-traumatic stress can have a range of presentations including intrusive, avoidant, and hyperarousal symptoms, which can affect individual's social and occupational functioning. These symptoms may settle over time and most people recover from without formal interventions. Relatively few individuals develop serious long-term problems. If symptoms are severe and persist a formal diagnosis of PTSD and clinical intervention may be warranted. Other anxiety symptoms and depression or dysphoric mood (i.e., feeling sad, hopeless, worried or irritable) are often experienced by individuals with post-traumatic stress disorder. Post-traumatic stress symptoms include:

- Intrusive symptoms where a traumatic event is re-experienced as "intruding" into a person's life following an overwhelmingly frightening or traumatic event. This could be in the form of nightmares about the bushfire or thinking about the bushfire when not wanting to think about it.
- Avoidance and numbing symptoms where the person attempts to block out unpleasant memories and feelings. As a result the person might try hard not to think about the bushfire or go out of his/her way to avoid situations that serve as reminders of it. They might feel numb, detached from others, activities and his/her surroundings.
- Hyperarousal symptoms where the person constantly feels at risk, causing him/her to be "jumpy" and always on guard. The person might be constantly on guard, watchful or easily startled (Taken from ACPMH NDa).

- Further information about post-traumatic stress symptoms and post-traumatic stress disorder can be obtained from the The Australian Centre for Post-traumatic Mental Health (ACPMH NDa).

The four items of the Primary Care PTSD Screen (PC-PTSD) (Prins et al 2003) were completed by 477 respondents. The PC-PTSD assessed respondents' experiences of the post-traumatic stress symptoms of re-experiencing, numbing, avoidance, or hyperarousal during the past four weeks. This measure of post-traumatic stress symptoms was selected as an appropriate screen for use in a community survey due to its brevity and readability, the absence of questions related to specific traumas, and its demonstrated ability to effectively screen for PTSD. The PC-PTSD has been compared with the PTSD Symptom Checklist (PCL) and its ability to identify PTSD has been assessed using the Clinician Administered Scale for PTSD (CAPS). The PC-PTSD was found to be 'a better predictor of Post-traumatic Stress Disorder (PTSD) (as diagnosed by the CAPS) than the PCL total symptom score' (Prins et al 2003:13).

According to Prins et al. the PC-PTSD has 'an optimally efficient cutoff score of 3' (2003:9) for identifying potential diagnosis of PTSD in both male and female Veteran's Affairs primary care patients, and primary care patients with a score of 2 or higher for post-traumatic stress symptoms (i.e., re-experiencing, numbing, avoidance, or hyperarousal) should be further assessed. However, possible diagnosis of PTSD should be interpreted with caution as diagnosis requires a clinical evaluation of symptoms including functional impairment.

Screening instruments can be an important tool to appropriately target individuals at increased risk of developing a disorder and in need of further investigation. However, it is important to bear in mind that ... they are not a substitute for clinical evaluation or clinical diagnosis' (Connor et al 2006:28). In order to diagnose PTSD it is necessary also to assess associated problems related to depression and dysphoric mood and use of alcohol or other drugs and the impact on social and occupational functioning.

Nearly three in five respondents (59.5%; n=291) did not report any of the listed symptoms of re-experiencing, numbing, avoidance, or hyperarousal. 198 (40.5% of N=489) respondents indicated they had experienced one of more post-traumatic stress

symptom. The average PC-PTSD score was less than 1 (mean=0.82, standard deviation=1.20) with individual scores for symptoms ranging from 0 to 4.

Table 1 *Post-traumatic stress symptoms experienced over the past four weeks*

Symptom	Respondents (N=494)	
	%	n
Re-experiencing	24.1%	119
Avoidance	19.2%	95
Hyperarousal	17.2% ^a	85
Numbing	22.8%	112 ^b

^a N=493; ^b N=491

Total PC-PTSD scores were obtained for 489 respondents. 12.9% (n=63) of respondents reported a level of post-traumatic stress symptoms that could meet diagnostic criteria for PTSD. Of those, 59.7% were women and 40.3% were men.

Just under one-quarter (23.7%, n=116) of respondents scored 2 or higher suggesting they could be further assessed for PTSD.

Figure 8 below shows a likely strong association between level of exposure as measured by fire-related losses and stressors and screening positive on the PTSD criteria.

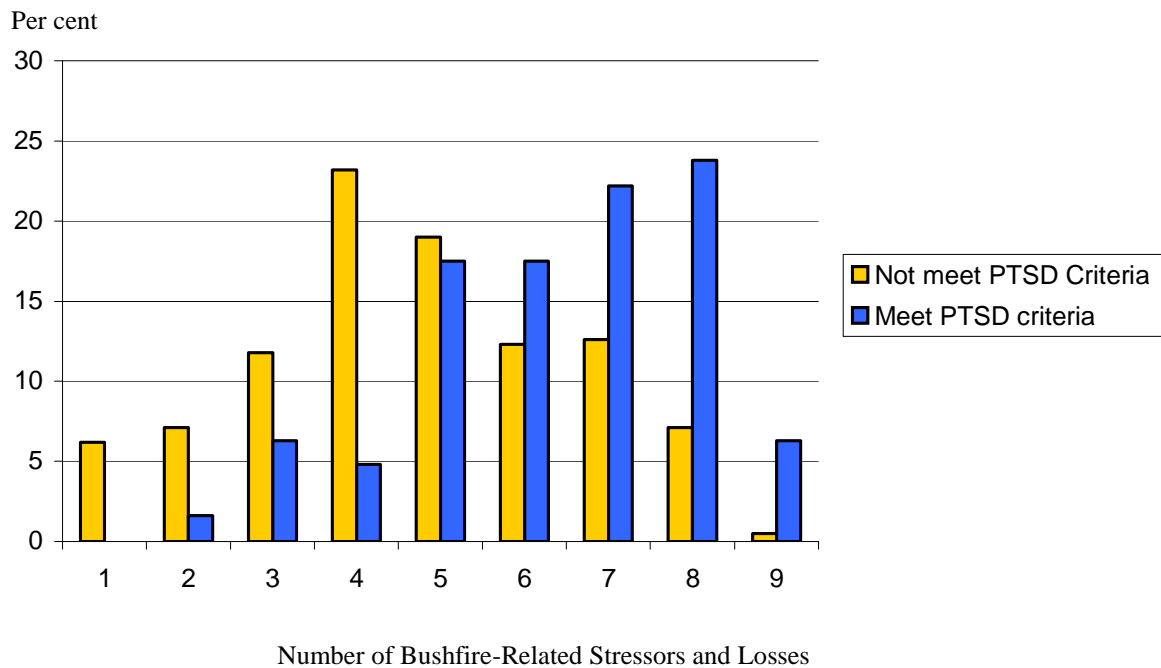


Figure 8 *Number of bushfire-related stressors and losses by high level of PTSD symptoms (3 or above) and low level of PTSD symptoms (below 3)*

While the 12-month prevalence of PTSD for all types of trauma in the Australian community has been reported as 1.33% (Creamer et al 2001), higher rates are expected in communities affected by disasters such as bushfires. Accordingly, results of the ANU population study (Parslow et al 2005) of 2085 individuals from the Canberra region also show high levels of PTSD symptoms up to 18 months later (5%). 60% of participants lived in areas put on alert in the bushfire. The prevalence was 6% for those with direct experience of the bushfire. These data are for young people aged between 24 and 28 years. 9.7% (n=48) of respondents in the current survey were between 18 and 35 years.

While Parslow et al. collected data between 3 to 18 months post-bushfire they found that the time between the bushfire and interview was not associated with PTSD symptoms. In addition, PTSD symptoms were more strongly related to bushfire experiences than pre-trauma factors. Participants who reported being more frightened and those who experienced uncontrollable traumatic experiences [e.g., being evacuated at short notice] were more likely to have PTSD symptoms (Parslow et al 2005:7).

These data confirm that bushfire disasters are likely to have a substantial influence on the mental health of a local community (Parslow et al 2005). Similar data are reported for the Ash Wednesday bushfires with 18% PTSD (McFarlane & Papay 1992) and the Newcastle earthquake with 18.3% estimated PTSD at 6 months post-earthquake in respondents reporting high exposure (Carr et al 1997a).

In our research, survey respondents are not representative of the entire population affected by the 2003 Canberra bushfire. In particular, the sample of survey respondents reported high levels of loss and damage to homes (78% reported perceived threat for self and significant others) and high levels of loss and damage to homes (74% reported structural loss or damage to dwellings). We expect that with greater disaster-related exposure and losses there will be greater likelihood of psychological morbidity. As found in previous research of an Australian natural disaster (Carr et al 1997), it is possible that 'threat exposure' (such as injury, fear of injury or loss of life contributes to post-traumatic stress symptoms) is especially likely to influence respondents' levels of post-traumatic stress.

The prevalence of reported symptoms could be influenced by the method of data collection. In the current research, post-traumatic symptoms were assessed over the past four weeks. During this time respondents had received the Community Survey. It is likely that participants recalled the events associated with the bushfire at the time of receiving or completing the survey. Some members of the Bushfire Support Network (a community support group) indicated that they found it taxing to complete the survey, however, they were pleased to have had the opportunity to participate. It is important to note that even if PTSD is present, it may not be an individual's most pressing problem. It is important to consider a range of psychosocial problems that an individual may experience.

Although post-traumatic stress is the most commonly studied mental health consequences of disasters, it is not necessarily the most common mental health problem experienced after a disaster. Other mental health problems occurring in a post-disaster environment include depression, bereavement complications, anxiety disorders, substance abuse, and adjustment disorders.

Non-specific psychological distress is not a particular syndrome or diagnosis, such as anxiety or depression, but rather an indication of various stress-related psychological and psychosomatic symptoms. While people with a range of mental disorders typically have high levels of psychological distress, a screening scale of non-specific psychological distress in a community study can indicate when levels of dysfunction and demoralisation are sufficiently elevated to require treatment.

Measure of psychological distress

A measure of non-specific psychological distress was obtained using the Kessler Psychological Distress Scale – 10 items (K10). The K10 is widely used in population health surveys, including the Australian Bureau of Statistics' National Health Survey and National Survey of Mental Health and Wellbeing (Kessler et al 2002). It is also used in a measure of outcomes in primary care and mental health settings (Pirkis et al 2005). Use of the K10 was recently recommended by the Research and Evaluation Consensus Meeting for Mental Health Aspects of Disaster and Terrorism (MH-DRC & ADF, December 2005). The K10 comprises 10 questions relating to negative emotional states experienced in the previous four weeks. It can be administered by interview or self-administered as in the National Outcomes and Case mix Collection (Pirkis et al 2005). Scores on the K10 range from 10 to 50, with higher scores denoting higher levels of distress. K10 cut off scores were obtained according to those used by the Australian Bureau of Statistics to indicate the level of psychological distress: low (0-15); moderate (16-21); high (22-29); very high (30-50).

According to the ABS 2001 National Health Survey, individuals with very high levels of psychological distress are more than twice as likely to use health services (hospital admissions, GP visits) than individuals with low levels of distress (AIHW 2004).

'Based on research from other population studies, a very high level of psychological distress, as shown by the K10, may indicate a need for professional help' (ABS 2006:8).

Almost one-fifth (19.5%, n=95) of respondents reported high to very high levels of psychological distress over the past four weeks. 11.5% of respondents reported high levels of psychological distress, and 8.0% very high levels. Of these, 63.4% (n=59) were women and 36.6% (n=34) were men. Data reporting the gender of two respondents was

missing. Of the 477 respondents with data available for psychological distress and gender, 21.3% (n=59) of 277 women reported high to very high levels of psychological distress, compared with 17.0% (n=34) of 200 men. A little over half (52.0%) of respondents were categorized with low levels of current psychological distress, and 28.5% with moderate levels.

Comparative proportions from the ABS 2004-2005 National Health Survey population data are shown in Table 2. State data for the ACT reports high/very high levels of distress for 12.4% of 18-64 year olds and 9.7% for 65 years and over. It is expected that the proportions for older persons are lower due to a lack of representative data.

Table 2 *Current Levels of psychological distress*

Level of psychological distress	Community Survey (N=488)	ABS 2004-2005 National Health Survey (ACT)	ABS 2001 National Health Survey (ACT)
Low (10-15)	52.0% (n=254)	62.9%	66.8%
Moderate (16-21)	28.5% (n=139)	24.1%	23.6%
High (22-29)	11.5% (n=56)	9.2%	7.0%
Very High (30-50)	8.0% (n=39)	3.8%	2.6%

Figure 9 shows the level of psychological distress by respondent age group. These data can be compared with the K10 data from the 2004 ACT SNAPS survey shown in Figure 10 taken from the ACT Chief Health Officer's Report 2006 (ACT Health 2006). Similarly rates of high/very high psychological distress can be compared between the community survey and other epidemiological studies for 2004-5 and 2001 (i.e. pre-bushfire) in Table 3.

Although there are some differences in reported age groups and the number of respondents in each age group is small, the proportion of high/very high psychological distress levels appear to high for respondents when compared with data from the ACT SNAPS survey and ABS National Health Survey 2004-2005, especially for those aged from mid-40s to 60s. The proportions of respondents' with high/very high are almost double some of the rates reported in epidemiological studies.

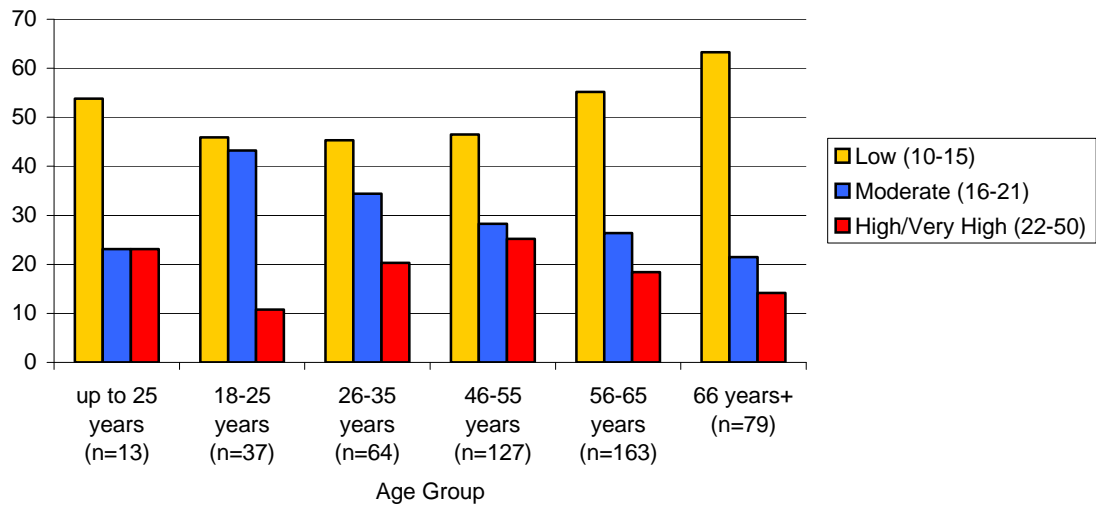


Figure 9 Psychological distress: Proportion of respondents by Kessler 10 score and age group

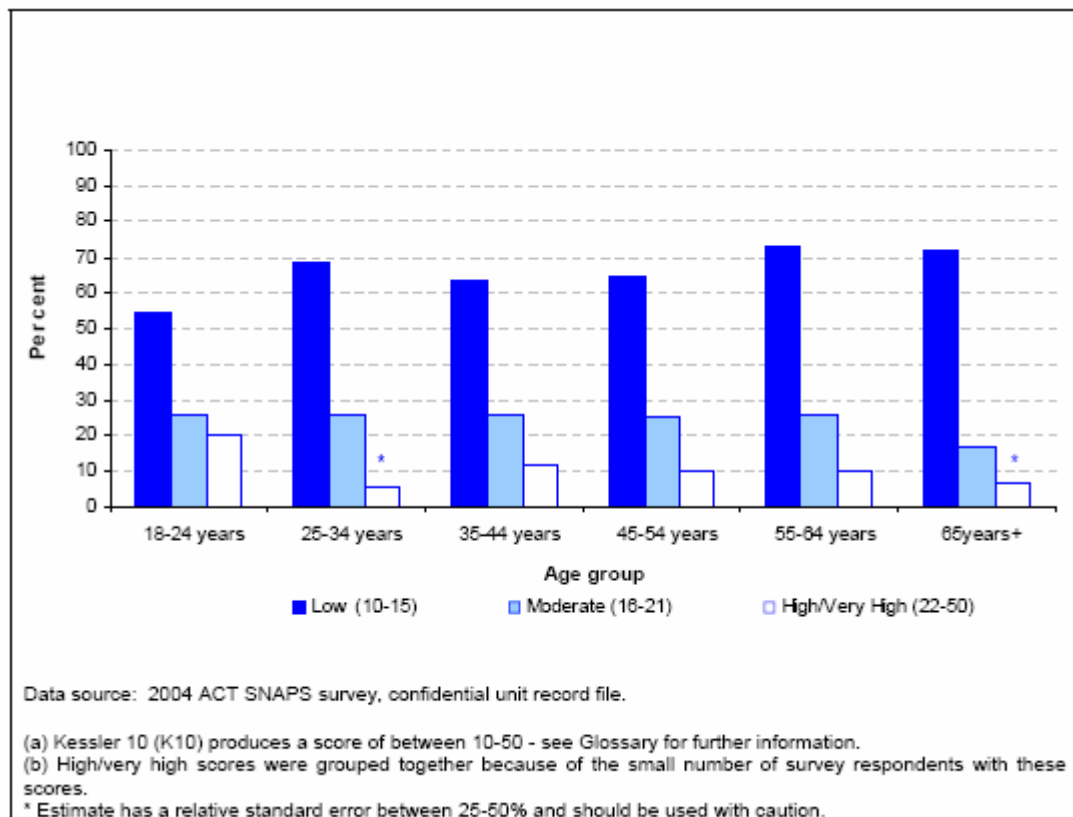


Figure 10 Psychological distress: Proportion of ACT adults by Kessler 10 Score and age group, 2004 (ACT Health 2006:107)

Table 3 Comparison of rates of high/very high psychological distress (K10, range 22-50) between community survey and other epidemiological studies

Study	Age Range							All persons
	18-24 (18-25) ^a	25-34 (26-25) ^a	35-44 (36-45) ^a	45-54 (46-55) ^a	55-64 (56-65) ^a	65+ (66-75) ^a	75 + (76+) ^a	
Community Survey (N=488)			10.8% (n=4)	20.3% (n=13)	25.2% (n=32)	18.4% (n=30)	14.2% (n=12)	19.5% (n=95)
2004 ACT SNAPS Survey (N=12,015)	20.2%	5.7%*	11.8%	10.2%	10.5%	8.0%*	5.1%**	10.8%
ABS 2004-05 National Health Survey National Data	15.5%	11.8%	14.0%	13.7%	12.2%	11.2%	10.7%	13.0% ^b
ABS 2001 National Health Survey ACT Data	11.8% (18-34 years)		9.1%	10.6%		5.4% (55 and over)	***	9.6%

^a Age range for Community Survey

^b 18-64 years, 13.4%; 65+ years, 11.0%

* Denotes a relative standard error of 25 or higher indicating estimate should be used with caution

** Denotes a relative standard error of 50 or higher indicating estimate should be used with caution

*** *Small numbers for this age group*

The relationship between respondents' levels of non-specific psychological distress and post-traumatic stress symptoms is shown in Table 4. There was a significant ($p=.000$) but not perfect association between likelihood of a level of PTSD symptoms that could meet diagnostic criteria for PTSD and a high/very high level of psychological distress on the K-10. This to be expected as the K-10 is a measure of more diffuse psychological distress.

Table 4 *Level of non-specific psychological distress by post-traumatic stress symptoms*

Post-traumatic stress symptoms (PC-PTSD)		
Level of Psychological Distress (K-10)	Below 3 (n=422)	3 or above (n=62)
	n=373	n=19
Low or moderate	88.4%	30.6%
	n=49	n=33
High or very high	11.6%	69.4%
N=884		

The sample participating in this research appears to have a high degree of sensitivity and vulnerability to mental health problems as indicated by the prevalence of high to very high levels of psychological distress. It is important to consider that the respondents for the community survey are not necessarily representative of the overall population or larger community samples and a direct comparison of data is difficult. However, we need to recognise that almost one-fifth (19.5%) of respondents (that is, approximately 100 adults) reported high to very high levels of psychological distress over the four weeks prior to completing the survey.

Compared with 2004 ACT population estimates, the proportions are especially high for those aged from mid-40's to 60's (that is, in the age group representing almost 60% of the sample of respondents in this survey). 8% had a very high level of psychological distress, as shown by the K10, that 'may indicate a need for professional help' (ABS 2006:8).

Findings suggest that a reasonably large number of individuals are distressed three years after the 2003 Canberra bushfire. This is consistent with the prevalence of post-traumatic symptoms reported previously in the current research and data from other studies. It is important to consider that over half the respondents reported low levels of current psychological distress. Further, as survey respondents are not representative of the general Australian or ACT population, comparisons with epidemiological data are difficult. Nor are they representative of the entire population affected by the 2003 Canberra bushfire. In particular, the sample of survey respondents reported high levels of loss and damage to homes (78% reported perceived threat for self and significant

others) and high levels of loss and damage to homes (74% reported structural loss or damage to dwellings). As found in previous research of an Australian natural disaster (Carr et al 1997), it is possible that 'ongoing disruption' (such as loss or damage to home or business or displacement) is especially likely to influence respondents' levels of general psychological distress.

Children and health

McDermott et al (2005) screened 222 children and adolescents aged 8 to 18 attending one Canberra school for post-traumatic stress disorder (PTSD) and general psychopathology, including emotional symptoms. Six months after the bushfire, primary school students in Grades 4, 5, and 6 were more likely to suffer PTSD and emotional problems than older school students. McDermott et al. categorised children according to school grade rather than age as school grade was considered a better predictor of emotional distress as it better approximated a child's developmental level (McDermott & Palmer, 2002). However, we can estimate that children in Grades 4, 5, 6 in the ACT would have turned 10, 11, or 12 during 2003 and be approximately 13, 14, or 15 at the time of the current research. Similar findings were obtained after the 1994 Sutherland Shire bushfire in New South Wales (McDermott & Palmer 2002).

In the post-disaster environment, post-traumatic stress symptoms were most commonly reported by children in grades 7 to 9 (12 to 14 years) and depressive symptoms by those in grades 4 to 6 (9 to 11 years). McDermott and Palmer hypothesised that older adolescents possessed greater ability to adapt, possibly due to more advanced cognitive development; whereas, younger children were protected by parental contact and interactions.

Survey respondents identified the difficulties they thought children experienced that might be related to the bushfire (Qs. 41, 90). To date the published research suggests that post-disaster problems are likely to include 'clinginess, dependence, refusing to sleep alone, temper tantrums, aggressive behaviours, incontinence, hyperactivity, and separation anxiety' in young children, and increased delinquency and deviance in adolescents (Norris, 2005:3).

A range of symptoms was described by respondents, including, being hyper aroused by feeling frightened or fearful of smoke or fire; separation anxiety; social phobia; sleep problems and nightmares; psychosomatic symptoms; over-reaction to losing possessions; difficulty concentrating; impulsive behaviour; aggressive and antisocial behaviour; depressive mood.

Many of these symptoms are consistent with post-traumatic stress, anxiety, or depression. Post-traumatic stress in children can be experienced as intrusive symptoms (e.g., where memories of the bushfire event can be triggered by exposure to fire-related observations and images and can be experienced as ‘flashback experiences’ or dreams), avoidance symptoms (e.g., avoidance of situations or activities that are reminders of the event), or arousal symptoms (e.g., feeling jumpy or on guard, feeling irritable or angry, having difficulty sleeping or concentrating). While depression is commonly associated with post-traumatic stress disorder, post-disaster depression can also occur in response to disaster-related effects on the child’s family (Pynoos et al 1995). Aggressive and anti-social behaviour are commonly symptoms of depression, especially in adolescent boys.

According to McDermott et al. (2005) many children will experience PTSD symptoms six months post-bushfire disaster, as illustrated by findings of 28.6% with mild symptom levels, 12.1% with moderate symptom levels, and 9.0% with severe or very severe symptom levels. This is consistent with parent-reports of 13% of children experiencing bushfire-related dreams or nightmares eight months after the Ash Wednesday bushfire (McFarlane, 1987).

Some examples of children’s bushfire-related concerns identified by respondents included:

- Fear of smoke, fear of being alone, easily stressed and very emotional
- Fear of loss of their parent, house etc.
- Fear of losing possessions.
- Fear of another fire coming.
- Frightened by the sound of fire engines
- Nervous and restless especially on hot, windy days or when they can see or smell smoke.

- Panic reaction to smoke (whatever its source) or smell of smoke in the air.
- Always upset when burning off. Both think it will happen again.
- Little upset and more understanding of people on the news in similar fires.
- Concern whenever any of the family are away for work, school camps, etc.
- Disinterested in going on holiday or being away from home.

Some problems mentioned by parents that related to the consequences of the bushfire included:

Lack of contact with friends. Friends who have moved have developed new contacts and don't maintain old [contacts].

My son grew up playing, riding his bicycle and playing in the pine forest. The place of his childhood no longer exists.

Parents indicated concerns about their own parenting as a consequence of the bushfire:

Having my child at someone else's house over night. I cannot do it.

My daughter is [2 or 3], but I think our parenting skills have been affected by the bushfire.

In the context of ongoing bushfire-related distress in the adult survey respondents and ongoing difficulties experienced by their children and adolescents, it is important to examine strategies for assisting children, young people and their parents. While 'providing care and support for their parents might be among the most effective ways to provide care and support to children affected by disaster' (Norris et al 2002b:247), it is also critical to also focus specifically on the problems of children and adolescents themselves.

Life in general

After a disaster such as a bushfire, most people usually find they feel a bit up and down for a while. However, not everyone responds in the same way. Lots of things influence how easy or difficult people find life after a disaster. We wanted to understand more

about how life had been for participants in the time since the bushfire – its ups and downs – and how they felt they were now at about three years later.

Respondents were asked about their current quality of life: How do you feel about your life now as a whole, taking into account what has happened in the last year and what you expect to happen in the future? Respondents were also asked: How did you feel about your day-to-day life before the bushfire? One in eight (12.0%, n=59) of survey respondents indicated they currently felt mostly dissatisfied, unhappy, or terrible about their lives as a whole. In comparison to this, retrospectively, only 3.4% (n=17) of respondents indicated they felt mostly dissatisfied, unhappy, or terrible about their lives before the bushfire.

Respondents were asked to think about how their day-to-day life was compared with before the bushfire at four intervals: In the first weeks just after the bushfire; about three months after the bushfire; about a year after the bushfire; and now, about three years after the bushfire.

For each of these time periods respondents were asked to identify whether their day-to-day life was: much more difficult; a bit more difficult; much the same; or better.

Figure 11 shows the relationships between self-report of day-to-day life compared to before the bushfire (better, much the same, a bit more difficult, much more difficult) and time since the bushfire (in the first weeks, about three months, about a year, about three years). As shown in Figure 11, the proportion of respondents who rated their day-to-day life as *much more difficult* than before the bushfire reduced from approximately three quarters (76.3%) in the first weeks, to approximately half (50.5%) at about three months after the bushfire, to approximately one third (31.2%) at about a year after the bushfire, and one-tenth (11.9%) at about three years after the bushfire.

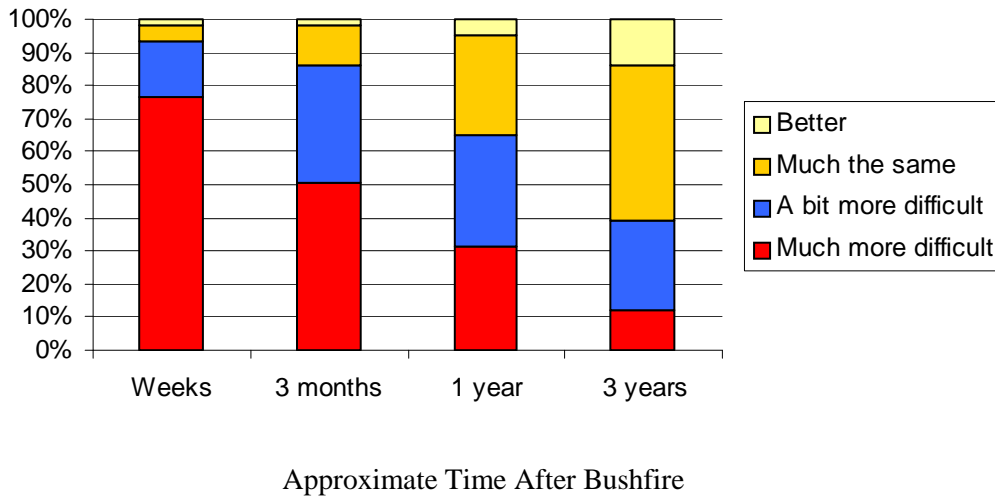


Figure 11 *Self-report of day-to-day life after the bushfire compared with before the bushfire*

In general, over the three years since the 2003 Canberra bushfire the day-to-day life of respondents gradually improved. Over time, as the proportion of respondents finding day-to-day life more difficult than before the bushfire reduced there was a corresponding increase in the proportion of respondents finding day-to-day life much the same or better than before the bushfire. Most marked were the changes in respondents' reports of (a) life being *much more difficult* than before the bushfire and (b) life being *much the same* as before the bushfire.

Regarding day-to-day life now, about three years after the bushfire:

- 11.9% (n=59) reported their day-to-day lives were much more difficult than before the bushfire
- 27.1% (n=134) reported their day-to-day lives were a bit more difficult than before the bushfire
- 47.0% (n=232) reported that their day-to-day lives were much the same as before the bushfire
- 14.0% (n=69) reported their day-to-day lives as better than before the bushfire

The profile of difficulties over time depicts a ‘work-in-progress’ with many (61%) respondents’ day-to-day lives gradually returning to be similar or even better than before the bushfire. It is possible that some individuals found an initial increase in distress and functional disruption and found life settled over time, while for others life settled reasonably quickly.

A proportion of respondents reported that their day-to-day lives were better than before the bushfire. This is consistent with adversarial growth where some individuals experience positive change and attain more optimal levels of functioning as described by Linley and Joseph (2004). However, three years after the 2003 Canberra bushfire, over one third (39%) report their lives to be a bit or somewhat more difficult than before the bushfire. Respondents who currently report life to be a bit or somewhat more difficult than before the bushfire are likely to be those with greater levels of exposure to bushfire-related losses and exposure.

Figure 12 shows the self-reports of day-to-day life for three groups of respondents: those who lost houses, those who had damaged houses, and those who reported experiencing no personal loss or damage to property. The graph highlights the differences in the proportions of respondents who currently reported life as much more difficult than before the bushfire according to the type of loss they experienced. Respondents who lost their houses were three times as likely to experience life as much more difficult than those whose houses were damaged.

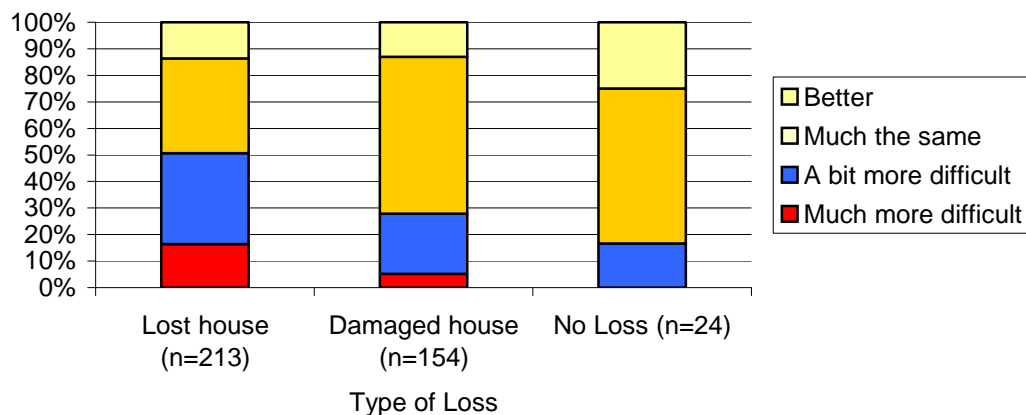


Figure 12 *Self-report of day-to-day life at about three years after the bushfire compared with before the bushfire, by degree of loss experienced*

It is likely that individuals exposed to disasters will experience different pathways in the months and years following the disaster. A range of pathways or trajectories have been identified in the literature:

- Low morbidity or resilience – quick return to pre-disaster levels of distress and functioning
- Recovery – some initial increase in distress and functional impairment that returns to lower pre-disaster levels
- Persistent morbidity or chronicity – continued high distress and functional disruption
- Delayed morbidity – increasing levels of functional disruption
- Growth – positive change to more optimal levels of functioning than pre-disaster

(Linley & Joseph 2004; Bonanno 2004, 2005a, 2005b; Bonanno et al 2005; Bonanno et al 2002; Lewin et al 1998)

The self-reports of day-to-day life for survey respondents in the time since the bushfire, and how life is now about three years later, highlights the issue that the effects of disasters can be quite enduring for a significant minority of disaster-affected individuals (Norris et al 2002). If, as the research suggests, we are likely to be able to identify the individuals who are most at risk for long-term distress fairly soon after disasters (Norris et al 2002), it is important to further understand who is likely to find life more difficult several years post-disaster and be able to proactively identify these individuals early on and provide them with opportunities that support their recovery process.

“If future disaster research improves our capacity to identify those at risk and those who are likely to recover, then two important consequences will follow: post-disaster interventions will be able to be targeted more effectively and detailed research protocols can be developed, and then applied to identified subgroups to help unravel the mechanisms by which these factors contribute to better or poorer outcomes” (Lewin et al 1998:19).

Greater understanding of the factors that influence the pathways taken by disaster-affected individuals is necessary if we are to assist individuals and the community to

follow pathways with minimal distress and impairment in functioning. Mental health issues are only one of the many areas of life likely to be affected by disasters and likely to influence whether individuals perceive their lives as more difficult, the same, or even better than they were prior to the disaster.

Bushfire-related stressors

It is possible that individuals experiencing disasters will be more likely to encounter life events or every-day life hassles than those who did not experience the disaster (Norris et al 2002a). In the context of initial disaster stressors these can be described as ‘secondary stressors’; that is, stressful life-events that occur in the period since the disaster and chronic stress associated with ongoing disaster-related disruptions.

These are of concern as secondary stressors can be associated with adverse outcomes (Norris et al 2002a). Although ongoing disruptions associated with the disaster are likely to reduce over time, such disruptions can be extended can persist, especially for those with greatest initial disruption (Carr et al 1997b). “Perhaps the most important lesson of all to learn is to recognise that the stress precipitated by catastrophic disasters is long-lasting” (Norris & Kaniasty 1996:509).

“Personal stressors are events or conditions that may adversely impact on an individual's life or the collective lives of families. A stressor may impact on an individual through direct experience, such as the individual suffering from a serious illness or being unable to find a job, or indirectly through a family member's illness or inability to find a job, or by the divorce or separation of parents. In some instances, the adverse impact of personal stressors may persist beyond the short term and have an ongoing impact on an individual's capacity to live a satisfying and productive life, or the capacity for a family to live as a fully functioning family unit” (ABS 2003:7). Respondents answered personal stressors questions based on those used in the 2002 and 2006 Australian Bureau of Statistics General Social Survey (GSS) (ABS 2003).

Of the 349 respondents who reported they (or someone close to them) had experienced at least one of the listed potentially stressful events or situations in the last 12 months, almost two-thirds (62.5%; n=218) of the respondents indicated at least one of these was either *somewhat* or *greatly related* to the bushfire: 37.2% (n=130) of the 349 identified

at least one as *somewhat related*; 43.0% (n=150) identified at least one as related a *great deal*. 21.8% (n=76) of the respondents indicated they had experienced at least one potentially stressful event or situation in the last 12 months, about which they were *unsure* whether it was related to the bushfire. 59.3% (n=207) experienced at least one potentially stressful event or situation in the last 12 months that they believed was *unrelated* to the bushfire. Data for six respondents provided multiple responses to potentially stressful events or situations indicating that these stressors were related to the bushfire at varying degrees.

Of particular interest was the high prevalence of the following stressors occurring in the last year, that is, at least 2 years after the bushfire:

- Serious illness - 30.3% experienced the stressor regardless of whether related to the bushfire or not; 10.6% of these experienced the stressor as bushfire-related;
- Serious financial problems - 30.1% experienced the stressor regardless of whether related to the bushfire or not; 20.7% of these experienced the stressor as bushfire-related;
- Mental illness or emotional crisis - 42.3% experienced the stressor regardless of whether related to the bushfire or not; 28.6 % of these experienced the stressor as bushfire-related;
- Alcohol- or drug-related problems - 14.3% experienced the stressor regardless of whether related to the bushfire or not; 10.5% of these experienced the stressor as bushfire-related;
- Loss of spiritual beliefs - 17.2% experienced the stressor regardless of whether related to the bushfire or not; 12.7% of these experienced the stressor as bushfire-related.

‘Other stressors’ identified by respondents included relationship difficulties and death of pets. Reduced ability to cope with potentially stressful events was also identified by respondents. Additional issues identified as stressful were a lack of trust in institutions (government systems) and reduced feelings of safety in relation to the bushfire-related reminders.

Mental health problems, financial problems, loss of spiritual beliefs, alcohol or drug-related problems and serious illnesses are some of the secondary stressors experienced in the third year post-disaster. It is important to note that relationship problems (except in relation to divorce/separation, abuse) were not reported in this measure of recent personal stressors. Assisting individuals to most effectively manage the potentially stressful events and situations they can encounter long after the initial disaster experience is likely to support their recovery.

Chapter Six examines what helped and what hindered recovery from the participants point of view.

Chapter Six - What helped and what hindered recovery

Introduction

Much of the literature on natural disasters and emergency management tends to conflate mitigation, response, relief and recovery. There are obvious overlaps in these elements and the capacity of individuals and communities to recover from a disaster is likely to be affected by the immediate response to that disaster (Pettersen, 1999:6). However, the issue of longer term recovery from disaster, in which our study is particularly interested, is quite different from that of immediate crisis response and short-term relief. This is true in terms of such things as psychological effects on individuals and communities and the longer term rebuilding of residential areas and infrastructure. Also, considerations of the role of government in the longer term are different from considerations of its role in the immediate crisis situation.

In order to establish a context for analysing factors affecting recovery, Chapter Six details the effects of the bushfire as identified by participants in the survey and interviews. In this chapter, we move on to look at:

- The services that were provided to people affected by the bushfire, including the model of service delivery established by the ACT Government
- Participants' responses about how helpful the various services were
- The actions people took towards helping themselves, either as individuals, as families or as part of informal neighbourhood and community groupings
- Personal factors and characteristics and their impact on the recovery process.

This material is then used as a basis for identifying and discussing the factors that affected recovery, either positively or negatively.

Sources of help and support

The services set up in the aftermath of the fires were guided by the ACT Community Recovery Plan. The Recovery Plan was developed and exercised by the Community Recovery Coordinator in the Department of Education, Training, Children Youth and

Family Services. The Plan was informed by the training provided by the National Community Recovery Consultant and the Emergency Management Australia Recovery Manual (EMA 2004).

Four evacuation Centres were established by ACT Government on January 18 to respond to the immediate needs of the 5000 or so people escaping the fire. The ACT community was very responsive, provided donations and practical assistance immediately.

In the following week the Government established the Bushfire Recovery Task Force to coordinate the government, community and business efforts to assist those affected and to manage long term recovery. The Task Force was a small group of high profile community representatives and public servants led by Mr Sandy Hollway. A secretariat (senior public servants from across government) was established to support the work of the Task Force and implement its decisions. This ‘whole-of-government’ team included ACT government staff from most government departments and a broad range of backgrounds, for example, administration, engineering, town planning, communications and social work.

The Task Force was advised by the Community and Expert Reference Group, which brought together fire-affected residents, community groups, unions, the business community, planning and environment representatives and the ACT representatives in the Federal Parliament.

In partnership with the Government and community, the goals of the task force action plan were to work as follows:

- Support those who have been significantly impacted by the fires
- Ensure that the community actively participates in the process of rebuilding and recovery
- Ensure clean-up of the Territory in a way that is safe, timely, efficient, cost effective and respectful
- Facilitate rebuilding in a way that is safe, timely, streamlined and provides individuals with real choices

- Provide up to date, relevant and useful information to assist with the recovery process
- Learn lessons from this event so the ACT community moves forward positively (ACT Government, 2003)

An important part of the strategy to support those significantly impacted by the fires was the ACT Recovery Centre.

ACT Bushfire Recovery Centre

As the evacuation centres closed and people found emergency accommodation, the government set up the ACT Bushfire Recovery Centre. The Recovery Centre was designed as a one-stop shop for the delivery of government and community services to bushfire-affected people. The Centre was established on 24 January in a disused wing of the Lyons Primary School and remained open until March 2004. Since that time, the Bushfire Support Unit located in Civic has provided services. The Unit remains open.

The Recovery Centre housed many government, non- government, charitable and community services under the one roof. Services and assistance reflected those recommended in the Recovery Plan plus other services required to respond to particular circumstances of this disaster. Shelter, food, clothing and financial relief, personal support and information were crucial in the early stages. Later, psychological services and information to assist in tackling the myriad of problems arising were needed.

Bushfire-affected households who registered for assistance at the Recovery Centre were allocated a recovery worker. The role of the recovery worker was to assess their social, emotional, financial and practical needs; provide support via home visits, Centre drop-ins, telephone contacts; provide information about services available and ensure smooth access to these services; advocate for flexibility in service provision, and broker between affected households and top decision-makers, providing information and a feedback loop to influence policy.

Recovery workers responded to requests for assistance, but were also proactive and provided outreach through home visits and community events. They prioritised their work according to risk factors. These factors were developed from professional

presentations provided by recovery experts, particularly Dr Rob Gordon and Professor Beverley Raphael. The factors were used as a guide to those people most in need of service as follows: bereavement or serious injury; separation through evacuation; fear of loss of life or that of loved ones; prior trauma and disadvantage.

Recovery workers were organised into locality based teams and worked with local groups to provide community events and activities. Partnerships and joint activities developed between recovery centre staff and the range of services working there, and with local groups, particularly the resident organisations that grew out of the disaster. Recovery workers supported emerging groups and the Recovery Centre provided office space, photocopying, free phones, etc for groups to communicate with their members. Woden Community Services and Communities@work continue to provide community development services to the affected communities.

The Recovery Centre was rated highly by respondents. 88.3% (n=436) of respondents attended the Recovery Centre. 86.2% of those who attended (n=376) found the Centre very helpful or helpful. 70.1 (n=288) of respondents used a recovery worker, and 85.7% of respondents who used a recovery worker (n=247) found their recovery worker helpful or very helpful.

The majority of respondents made strongly favourable comments about the Recovery Centre, such as *'this was a great initiative'*, *'could not have survived without it'*, *'it was my lifeline'*, and *'I cannot speak highly enough of it'*. Respondents liked the convenience of having most services available under one roof. They appreciated having a place dedicated to their needs where staff understood what they had experienced and where they could express their distress without having people judge them. They liked the fact that when the attention of the outside world had moved on, the Recovery Centre and the Bushfire Support Unit remained available for them.

Some respondents were pleasantly surprised that the Recovery Centre had a community feel, *even though* government provided it. The respondents' comments were as follows:

The Recovery Centre was wonderful

Counselling at the Recovery Centre was very helpful

Organised street BBQs very helpful

Quilts at the Recovery Centre were beautiful

Case Manager visited our house and rang us very helpful. Just wonderful

Daughter benefited from the organised camps

I was kept informed the whole time through the Recovery Centre

Recovery Centre was fantastic. It provided such a great place to go – centralised; all there; didn't have to explain yourself all the time e.g. if upset; feels she simply wouldn't have coped in the first 12 months without the RC. A real lifesaver! Govt seemed to have employed just the right kind of person – everyone prepared to go the extra mile. So well-balanced - coffee mornings, craft groups, support for caring for grandchildren, didn't have to pretend to be ok; just being there with lots of others with similar experiences. Also, it was humbling; you learnt to share grief, to be accepting of other people's loss.

Recovery Centre provided lots of advice, practical things; right from 2nd or 3rd day, well organised, volunteers. Insurance industry, architects free, clothes.

Found out later there was a strategy in place – important.

Felt like the community because even though they were public servants they volunteered – volunteers.

Felt like support would be there if you needed it.

Some respondents were concerned that the Recovery Centre closed too early. One said:

BRC closed down too quickly. A lot of people were too scared to say things – a lot were embarrassed to use the facilities- they had never had to do it before. I felt guilty in the end taking things ...that feeling sometimes stood in the way.

For a smaller number of respondents, the Recovery Centre was less relevant and did not meet their needs. Although many appreciated the ‘one-stop shop’ nature of the centre, one experienced a bureaucratic run-around and another was given incorrect information. One said that they had to repeat their story too many times and another was not assigned a particular caseworker. Some respondents from rural areas or settlements commented that they felt the Centre was not well set up to deal with their situation and the difficulties they faced in recovering from their losses. Two respondents said that the Recovery Centre was not as accessible to people who were working. Some were concerned that the counsellors changed over time.

Recovery Centre good, closed too soon, needed to get men more involved. Difficulty of getting consistent counselling. Praise for the director of the centre. Things scheduled during working hours were inaccessible for working people.

There were support workers at the recovery Centre; it was nearby; generally you could just walk in and see people; we had our community meetings there; so it was like a community centre to a large extent. When they moved into Civic, the resources might have been there but it wasn't quite as convenient and it didn't have that same sense of community.

Respondents were asked about communication and information from the Recovery Centre. Some useful conclusions can be drawn about which government communication was effective, which wasn't and what could have been done differently to effect a better outcome. In the next chapter issues of communication and media are further explored. It should be noted that many respondents used the survey as an opportunity to state their views on what they saw as the lack of information about risk and what they believed government authorities should have done on the day of the bushfire.

A large majority of respondents said that the provision of information from the Recovery Centre was either helpful or very helpful (79% n=479). Positive responses included the following:

I can find no fault in the information which was available at all times.

They did a fantastic job, very caring and supportive.

Excellent as far as my needs went and hearsay evidence indicated the same thing.

I think they did their very best and were helpful at all times.

I thought they gathered all information well and presented extremely efficiently

Under the circumstances, I don't think it could have been done much better. 'Community Update' was a brilliant idea and the best source of information. Compulsory reading! The staff didn't always have answers to my questions, but they always tried to get the information and ring me back.

It was brilliant. Set the benchmark.

A number of people wanted recovery workers to come to them 'in situ' to better provide appropriate information based on a personal experience of the information needs of those affected:

Visit 'uninhabitable' residences so they would have a better understanding of what that meant.

Come to us – we were at meetings on different topics at different places just about every week, with 3 young children just couldn't get to all of them & consequently was not as well informed as I would like.

Have these representatives visit the sites more often and face the survivors.

It could have organised volunteers to visit each house in the disaster zone to personally check on elderly or other survivors who were reluctant to seek help.

Maybe door-to-door visits.

There were also comments suggesting the provision of more specialist information relating to rebuilding, insurance, real estate and the rental market, and some felt information provided was either not relevant to them or predominantly aimed at another group:

*Better and really dedicated professional advice on: Financial affairs;
Rebuilding.*

They could have asked about the area of most interest to us, e.g. insurance, rebuilding, house rental market, etc, and then gave us detailed information on that area of interest.

Brought in better informed technical advisers who knew the real costs of rebuilding.

We did always receive information in the mail. It was aimed at people who were rebuilding staying in the area.

Was very much geared to town people – city dwellers. Rural people hardly got a look in.

Other comments about the Recovery Centre elicited mostly favourable responses (for example: *‘Their performance was magnificent and, I believe, lifesaving’*, with exceptions relating to some respondents feeling that information was geared only to those who had lost their houses. One person suggested a mobile recovery centre:

I think they should have had mobile units visiting the affected areas. A lot of the people in need were out there cleaning up needed someone to talk to.

Others noted that information was not readily available when they needed it, or indicating the need for information to be repeated over time:

Often information was received after an event had taken place.

There was a lot of information that we never received. It could have been the state of mind we were in the first year after the fire.

Other suggestions included more use of email and improved briefing of recovery workers, and especially of volunteers, on areas of specialist knowledge. Some respondents said information reached them only through word of mouth.

Respondents were asked to assess the helpfulness of assistance provided at or through the Recovery Centre. A range of government, business and community organisations provided these services. Respondents expressed general satisfaction with all services. The higher ratings were for services that provided tangible goods and financial assistance.

There were many offers of free goods and discounts from Canberra businesses and community organisations both through the Recovery Centre and advertised in Community Update and *The Canberra Times*. These offers were widely taken up (66.7% n=279 respondents) and highly regarded by those who took advantage of them (very helpful or helpful 93.9% n=262).

The Salvation Army, St Vincent de Paul and others provided Emergency food, clothing and furniture assistance at the Recovery Centre and through their Canberra shops and services. 48.2% (n=195) of respondents used this assistance and 92.3% of those who used it (n=180) found the assistance very helpful or helpful.

The Phoenix Group, Anglicare and volunteers provided practical assistance, over a number of gardening days, to those households who were regenerating their gardens. The ACT government provided free plants. This assistance was used by 52.4% (n=221) of respondents. Of those who used this assistance, 85% (n=188) found the assistance helpful or very helpful.

Financial assistance was in the form of disaster relief grants, rates waivers, etc provided by government (in the main to households whose homes were destroyed), and grants from the Canberra Bushfire Recovery Appeal. This assistance was widely used (63.4% n=264 respondents), and 84 % (n=222) of those who used financial assistance regarded that assistance as very helpful or helpful.

In the 12 months before we were back in the house (rebuilt) there was a stream of practical support. We had \$5000 in the first 10 days then \$5000 to clear the blocks. When we moved in we got \$5000 to come back. Then another \$5000 in kind support – rates subsidies and other discounts (eg: hot water systems) – TV, rugs etc. Also the quilts that we all received. Shops assisted. The banks assisted.

The Salvation Army, Anglicare, the Uniting Church, recovery workers and others provided personal and spiritual support through the Recovery Centre. 43% (n=176) used this support, and of those who used it, 78.4% (n=138) found it helpful or very helpful.

The Salvation Army were there with a cuppa and a biscuit.

The ACT Planning and Land Authority and the Recovery Centre provided rebuilding advisors to assist people to make decisions about rebuilding. 38% (n=156) of respondents used this assistance. 72.4% (n=113) found it very helpful or helpful.

Used the R/C a lot, esp. for practical things. Especially liked the workshops on passive solar for rebuilding.

Professional counsellors, provided by ACT Health and later Relationships Australia, were available for appointments at the Recovery Centre and for outreach visiting. 43.9% of respondents (n=181) used this service. 69.6% (n=126) found this service helpful or very helpful.

Went to Recovery Centre Counsellor for 8 months on a weekly basis, until the BFSU shut. Talked to her, she did not offer an opinion, sick of getting people's opinions, was like a 'diary' – pour out to her – huge relief. Not embarrassed could cry and be angry and that was OK. So glad it was available.

The Act Government provided free business counselling and mentoring to business people affected by the fires. Many home-based businesses were lost in the disaster. 7.4% (n=30) of respondents reported that they had used this assistance. 66.6% (n=20) found this helpful or very helpful.

The Bushfire Recovery Task Force provided an insurance advisor who acted on behalf of bushfire-affected households to resolve issues with insurance companies. As at November 2003 the advisor had responded to 77 insurance complaints and resolved 69 to the satisfaction of bushfire-affected households (Bushfire Recovery Task Force 2003:98). 37.2% (n=153) of respondents used insurance advice. 64.7% (n=99) found the advice very helpful or helpful.

ACT Housing and Adracare provided assistance with emergency and temporary housing from the Recovery Centre. ACT Housing offered rehousing to all their tenants and provided leases in ACT Housing properties for other households. Not many respondents (13.1% n=52) reported that they used the accommodation services offered through the Recovery Centre. 53.8% n=28 of respondents reported these as very helpful or helpful.

Services accessed outside the Recovery Centre

359 respondents answered the question about where else they sought help. When respondents were presented with a list of sources of help other than the Recovery Centre and asked to identify which of these if any they had used, doctors or general practitioners formed the largest category, used by 45.1% (n=162) of respondents. Community health or counselling services were used by approximately 32.3% (n=116) with health professionals or counsellors in private practice being used by 17% (n=61). Other categories of help used by significant numbers included residents' associations, such as Chapman, Phoenix or Pierce's Creek, which were identified by 26.7% (n=96), and self-help resources such as books, magazines and the internet, used by 28.4% (n=102).

When asked to name other sources of help used, respondents identified a very diverse range. The most commonly named were family, friends, neighbours and work colleagues, i.e. informal sources. Some others included: school-based counselling or support groups; work based counselling; church based counselling/support; small groups with either a specific recovery focus or activity-based such as craft or recreational; and a variety of individual pursuits such as gardening or writing.

There were also numerous comments about support from the community more broadly, for example, Duffy Primary community outreach; the Phoenix garden group; various retail businesses; churches; and many clubs and both formal and informal groups. There was a lot of favourable comment about the community/welfare agencies who moved around damaged suburbs in the early days after the fire and distributed food and cold drinks to people working on their blocks or damaged houses in difficult circumstances without access to essential services such as water and electricity.

In relation to the restoration of essential services, several respondents were very happy with the service provided by ACTEW and Transact, saying, for example, '*They were fantastic!*'. Others were disappointed with the length of time it took for services to be restored or were critical of the priorities of some agencies.

295 respondents answered the question about barriers to help-seeking. Some of the reasons identified by respondents for not seeking help from professionals or services

included: did not need help (28.5%, n=84); felt that there were others in more serious need (51.9%, n=153); did not think that services could help (15.3%, n=45); don't like asking for help (24.1%, n=71). 61.7% (n=182) indicated that they did not seek help from professionals or services because they talked things over informally with friends, relatives or neighbours and/or benefited from informal neighbourhood support, both practical and emotional.

Respondents were asked to list any services/assistance they needed that were not provided. A number of people commented on delays in restoring essential services, particularly water and power. Some comments related to housing e.g. the need for better quality public housing relocations, and assistance in obtaining longer-term accommodation. Some respondents indicated that there was not enough priority given to people whose houses were damaged but not destroyed and in some cases were incorrectly advised that they did not qualify for assistance. Others commented that they felt overlooked if they were in a suburb where only a few houses were destroyed.

It is clear from a number of comments that the reason some people did not access particular services or support was that they did not know those services were available, in other words the problem was about communication rather than services being unavailable.

Advice on insurance matters and a need for mediation between individuals and their insurers were suggested as an unmet need. There were also comments about unfortunate individual experiences across a range of services, both public and private.

Out of 38 survey respondents who answered the questions about children, 28 identified that their children used school-based counselling for support after the fire, making this the most commonly accessed form of help among the listed options. Of the other options, Recovery Centre counsellors were listed by 12 respondents, community or private health and/or counselling services by 21 respondents, and doctor or general practitioner by 10 respondents. Some other options identified by smaller numbers of respondents included group-based programs, church-based counselling and alternative approaches such as massage or participation in Outward Bound activities. A number of respondents identified activities that were provided at some schools but not at others,

e.g. individual help/counselling and opportunities to talk in groups; and creating an environment that made allowances for the child's loss and had realistic and flexible expectations.

In response to a question about services that were not provided, respondents identified a need for services tailored to teenagers and young adults e.g. those who had helped fight fires; those about to leave Canberra to study or work elsewhere where there was no awareness of their fire experience; and counselling and other support services tailored more specifically for adolescents.

Community development and community events

The Emergency Management Australia Disaster Recovery Manual presents a number of guiding principles relevant to this research. Principle 4 outlines a community development approach as follows:

The management of disaster recovery is best approached from a community development perspective and is most effective when conducted at the local level with active participation of the affected community and a maximum reliance on local capacities and expertise. (EMA 2004:105)

One demonstration of the efficacy of this approach after this disaster was the capacity of the community to organise itself to come together in community events and activities, to support each other socially and emotionally and to provide information to assist people to make the many decisions confronting them. New organisations such as the residents groups from the Mt Taylor estate, Chapman, Stromlo, Pierce's Creek and Uriarra and the Phoenix Association arose out of the disaster.

Existing groups based around schools, churches, service groups, business, peak groups and other communities of interest such as the Weston Creek Community Council also played a strong role. Organisations not previously aligned and not used to working together, such as ACTCOSS, the Chamber of Commerce and charities came together in remarkable alliances to organise assistance for the bushfire affected community.

These formal and informal groups, and the ACT Government, often in partnership, organised a number of social, commemorative and information events for bushfire-affected people and the wider ACT community. Events were for geographic communities such as streets and neighbourhoods, as well as for communities of interest such as children, older people, rebuilders and people interested in the regeneration of the environment, or parents who had babies close to the time of the disaster. Often recovery workers and recovery centre counsellors attended these events and mingled to offer help to those struggling with the effects of the disaster.

The most popular of these events were those organised by local streets and neighbourhoods (and in some instances by the Recovery Centre) to assist people to get to back in touch to share experiences, discuss common issues and get information on help available. 61% (n=292) of respondents attended these events, and 91.7 % (n=268) found these events helpful or very helpful.

In the interviews some respondents commented that they found these events easier than talking to a counsellor. Others spoke of the importance of the street parties and barbecues where people could exchange stories; get things off their chests and have a bit of fun. Even where the disaster was not discussed, they said, it was good to be with people who had been through the experience and understood. These events were said to be excellent in cementing neighbourhood relations. One woman we interviewed gave this account of an initiative she was involved in:

Recovery Centre was very good -the phone calls and that sort of thing – very supportive. We ran a recovery walk through them. We must have had about 200 people up on Cooleman Ridge. The aim of the thing was to see what was recovering but it turned into some kind of fast walking race ...I think they got something out of it...That came out of a flyer sent out by the Recovery Centre saying ‘would you like to do something about the recovery – the groups all said yes. So Cooleman Ridge got their act together down there. I don’t know who came up with the idea... We made contact with the Recovery Centre – and said we’d like to do a walk. The RC just organised flyers. Then in the Spring following, we all organised botanical walks – had

*four or five botanical walks – we had great fun. I had run it before the fire.
But it did seem to be important to do that.*

Next popular were commemorative events such as the first anniversary commemoration, the memorial service for animals who died in the disaster, and the dedication of the bushfire memorial. 39.1% (n=191) of respondents attended commemorative events. 86.4% (n=165) attending found these events helpful or very helpful. Some found lower key commemorations, such as in their local church, more to their liking. One person commented that these events were important because recovery was certainly helped by being connected to the community. When she attended these events, she felt that she was being supported, but she was also able to show her gratitude and in a small way contribute to the building of a sense of community.

Other events were attended by fewer respondents but those attending found them helpful. Information sessions on the emotional effects of disaster were attended by 14.8% (n=72) and 87.5% (63) found them helpful or very helpful. Rebuilding information events were attended by 30.4% (n=152) and 79% (n=120) attending found them helpful or very helpful. Children's events were attended by 6.4% (n=30) and of those, 93% (28) found them helpful or very helpful. Events for particular age or interest groups were attended by 6.6% (n=32), and of those, 81.25% (26) found the events helpful or very helpful.

Particular events such as the Salvation Army camp for kids, the AIS fun day, the lake cruise for over 70s, Duffy School get-togethers, and street afternoon teas at the Recovery Centre were mentioned as very helpful and people were surprised and pleased to be invited. Others found the information events, such as the tax seminar, rebuilding nights, and the session on emotional effects given by Dr Rob Gordon very helpful.

Some people did not attend events and felt negatively about them. Some who had not lost their home but whose homes had been damaged and lost gardens felt left out. Others felt that it was unhealthy to dwell on the past and felt that people needed to concentrate on moving on, objecting to the dedication of the memorial three years on. Others said that there was still a need for community organised commemorative events, and

commented on the importance of the continuity of activities arising out of the disaster, such as Community Fire Unit Training.

Self help and mutual help

In this section, our focus moves broadly to the actions that people undertook to help themselves and each other in the aftermath of the bushfire. We refer to these actions as ‘self-help’ and ‘mutual help’, and have taken them as indicators of resilience at both personal and community levels. The notion of community resilience as ‘individual and collective capacity to respond to adversity and change’ (Healy et al 2003) is especially relevant in the context of disaster recovery. It is linked in the literature to the concept of social capital, broadly taken to refer to the norms and networks that enable people to work together to resolve problems and achieve common goals. We were interested to obtain information about exactly these processes, to understand what it was about people both as individuals and as members of families and groups in local communities and neighbourhoods that enabled them to ‘respond to adversity and change’ and to ‘work together to resolve problems and achieve common goals’ in the wake of the 2003 bushfire.

Much of the material we gathered about these aspects of recovery came from what people said during their interviews, where they had the opportunity to talk in depth if they wished about their own process of recovery and what had been important for them. There were also several open-ended questions included in the survey, which gave people an opportunity to identify factors important to their own recovery. For example, there were questions, which asked people to identify firstly the three most important things they thought helped people recover and secondly the three most important things that they thought held people back from recovery. In the discussion that follows, we have picked up on the responses that relate to self or mutual help and also on some broader reflections that people offered on the whole experience.

One overriding observation is that there was no single universally shared experience or factor that helped or hindered recovery for everybody. Responses about almost every aspect of recovery were marked by their diversity across the population that we surveyed and interviewed.

Community activism

One instance of this diversity is the way that people viewed community activism. We mentioned earlier in this chapter the emergence of community-based self-help groups following the fire, and their links in some cases with the Bushfire Recovery Centre. We are interested in particular in this section to show what people felt about this kind of self-help and how it related to individual experiences of recovery

There were some government-related aspects of the fire and the recovery process that prompted adverse comment and were mentioned by a number of participants as factors affecting their recovery. The first of these is the issue of the perceived lack of warning to the general population about the approaching fire. For many of those who were surveyed and/or interviewed, this aspect of the disaster became an ongoing source of anger and helplessness about the whole event, and one they identified as having delayed their recovery.

A second aspect has been the ACT Coroner's Bushfire Inquiry, with the extensive delays and perceived interference in the judicial process being cited by many as a factor delaying their recovery. Some spoke of a feeling that they could not 'move on' from the fire and the losses they experienced until there were official findings about causes and people who could be held to account for those causes. Yet another aspect of government activity that was seen negatively was the delay in decisions about the rebuilding of the small rural communities that were destroyed or extensively damaged.

The significant community activism that developed around each of these aspects was identified by some individuals as important in their recovery. For some, for example, their involvement in the fight to have their local rural community re-established helped them to channel their anger about the fire and to maintain contact with the members of that community even though they had been dispersed across Canberra in replacement housing. In the case of Tharwa, one tangible result from their activism was being given new replacement fire-fighting equipment, a significant improvement on what they had before the fire. One interviewee, who has been prominent in activity directed at making the government and public officials more accountable for what happened in the lead-up to the fire, considered that his activism and involvement in the overall recovery effort have been important to his own recovery.

Another person spoke of the helpfulness of activism engaged in on a lesser scale, having become closely involved with a small group of others (some former residents and some looking to buy blocks and move into the street) in the re-establishment and re-development of their fire-ravaged street. She spoke of this kind of involvement as 'a therapy' which helped her overcome her sense of loss and her reluctance to be part of a new 'community'.

This kind of satisfaction accords with the findings of a number of studies, which indicate that public participation, can foster a sense of community ownership in the recovery process (Pettersen, 1999:16). Interestingly, there is evidence that self-determination may in part be enhanced by the financial position of communities and individuals, where those with greater wealth are likely to have greater choice and capacity to organise their recovery needs. This fits well with the socio-economic profile of the most severely affected suburbs in the Canberra bushfire, where the demographic characteristics of the dominant Statistical Subdivision show a community that is likely to have a relatively low rate of unemployment, a relatively high income and relatively low levels of socio-economic disadvantage.

As with almost every other aspect of the research, there were also many participants who felt quite differently about these matters. They considered that some people in the community had politicised and prolonged the inquiry process and focussed on blame at the expense of acceptance and recovery. Some felt upset or annoyed by what they saw as the outspoken and negative position taken by some more prominent activists; they put the view that this kind of negativity was of no practical value and actually delayed the whole community's recovery.

One man expressed strong disapproval of this kind of activism in terms of the impact it had on children. Having worked hard with his own children to help them come to terms with all their losses and to move on, he was upset by the publicity given to those intent on finding someone to blame for the fire. Yet another person, who lost his house and almost his life as well in the fire, came from a suburb where relatively few houses were destroyed. He spoke of feeling like an outsider at one or two meetings of community advocacy groups he attended, which sprang up in suburbs where large numbers of houses had been destroyed, but said he observed over time that involvement with these

kinds of group seemed to make some people feel ‘stuck’, unable to move on and come to terms with what had happened.

Yet another perspective suggested by some people was that local activist groups were ‘a good thing’ overall but were not appropriate for everyone, for a variety of reasons. One woman we interviewed described her experience as follows:

We were really keen and got involved [in a local group] in the first few months and then our energy ran out. The two people who ran it were like saints. They worked so hard for everybody. My husband and I also wanted to work hard for everybody but we ran out of steam. I think that’s where you have to be really sensible ... when you run out of steam, you need to take a break, sit back and reflect... otherwise that’s how you get sick. We needed that like a hole in the head. We both felt it and neither of us said anything, but we both just kind of backed off.

Volunteering

Quite a lot of community activity was related not to ‘activism’ as such but to practical recovery issues. This often involved the participation of volunteers, some of whom had been directly affected by the fire and others of whom simply wished to offer help to others. Several examples of this kind of community activity involved aspects of gardening or natural regeneration. One interviewee spoke of satisfaction gained from being involved with a group of volunteers that monitored the progress of plant regeneration in Tidbinbilla Nature Reserve. Another found it helpful to her own recovery and sense of connection with others affected by the fire to work as a volunteer with the Phoenix Group, helping people to select plants for their gardens:

I got involved in the Phoenix Group. I work four days, so one day a week I would go to Weston and spend from about 8.30 to 12.00 or 200 waiting for people to come through and we’d give them plants. I would give advice because I love Australian natives. These people would come with no idea of what to plant and I would guide them to all the native plants. There were a lot of elderly people who had lost their gardens and didn’t know where to start. I got a lot of enjoyment in helping them make decisions about plants

and would see their faces light up when they walked away with all these plants that would normally have cost a small fortune. These were all donated through nurseries, not only in Canberra but Melbourne and Sydney and local people who propagated the plants. It was fantastic and it was run by volunteers.

Many others appear to have worked together in school settings, using these as a base for providing mutual support both practically and emotionally. Comments from one interviewee suggested that there was a lot more capacity and willingness in the community to volunteer but that it was never tapped because some of the relevant agencies were reluctant to draw on volunteer help. She considered that not being able to help was an obstacle to recovery, as she explained:

If I could – I would have gone off and organised people to do things – there were a lot of volunteers who wanted to do somethin,. We would have repaired fences and gates...because a lot of people use Mt Taylor for their health now.

One of the frustrations we've had with the Parks people has been the lack of consultation with their volunteers and the care of their volunteers. Generally all the volunteers felt they were superfluous. They failed us in that lack of care – because we could have done so much more to assist them.

There is a huge need...to act quickly. You mustn't have impediments that stop people doing things. Total lack of ...well Parks and Wildlife had never had anything like that before. It was a big obstacle for people not being able to do things. You feel good when you're doing something for somebody...what made me think of that as I was coming in was that there was a lot of activity during the Blitz - people just got on with it. They just did things. I think we've gone soft on that. Also thinking of the Tsunami...the Indonesians just got stuck in and did things and others sat around waiting for things to happen. We need to remove barriers to promote recovery.

Church and other group membership

A number of people found the support they received through their church group to be invaluable, and this effect was often linked with the benefit they also derived from their religious faith. This is consistent with responses in the survey indicating that just over a third (35%) reported that their religious beliefs and belief in humanity were in fact stronger after the fire. Others found their membership of various recreational groups (e.g. sporting) helpful, both because of the activity itself and also through the opportunity to socialise with others with common interests other than fire-related ones. The feeling of continuity with 'normal life' that their membership of these groups represented was helpful for some people.

Other members of these groups were often the providers of practical help as well. One woman told how members of her church helped with meals:

During the first month after the fire, we only had to cook two meals for ourselves. We have a very strong network of friends through the church.

Support through family, friends and neighbours

When people were given an opportunity in the survey to list those factors that they felt had helped people to recover, responses very frequently related to support through family, friends and neighbours, described in a variety of ways such as:

- Practical and emotional support from family
- Family support
- Talking with family, expressing feelings and sharing emotions with them
- Support from friends
- Support/talking/kindness
- Neighbours coming together, helping each other
- Sitting down as a family and talking about it all the time and letting our children talk openly about it
- Understanding each other's feelings and talking about them within your own fire-affected family
- Friends and neighbours helped one another

Family, friends and neighbours were also mentioned quite frequently in the context of factors that delayed or hindered recovery. Factors expressed in the following terms indicate the hurt and disappointment and tension that can occur in relationships in the period after a disaster, or simply the gap that people feel if this kind of support is not available to them:

- Returning to a community that is completely different and without many of the original neighbours
- Being isolated physically and emotionally
- Lack of support from family and friends
- Lack of support from within your own family
- Loss of friends
- Lack of close support and people who will listen to your pain
- Friends not understanding your situation
- Lack of understanding by the bushfire victim's own family of the bushfire experience

Several respondents mentioned the pain of seeing their children or other family members suffer as a factor that affected their recovery, for example: Watching your children suffer as a result of their loss and your children realising the lack of understanding from people such as their peers, teachers, and the school generally.

Similarly in interviews, many comments highlighted the importance to the recovery process of people's relationships and the level of support and understanding they received through those relationships. Within families, it was often the person's partner whose love and support was crucial to their recovery, and a number of people interviewed considered that sharing the experience of the fire and all the difficulties that resulted from it actually brought them closer and strengthened their relationship, which in turn helped them their recovery.

In a couple of instances, people identified this as an unexpected positive outcome of the fire, which they felt on balance, outweighed all the negatives. Similarly, several commented that the loss of all their material possessions had made them more intensely

aware of the importance of their family relationships and that this helped give them perspective as they came to terms with their losses and re-established their lives.

This kind of strong emotional support and understanding was mentioned frequently in interviews as coming from sources other than family as well. As they did in the survey responses, people in interview commonly cited the importance of talking with friends and the helpfulness of friends who were able to be patient and not judge or hurry them, who understood that this was an experience from which it might take quite a long time to recover fully. In terms of relations with neighbours, it is very clear that recovery for many people was facilitated by the opportunity to share the practical aspects of rebuilding with neighbours along with the ongoing social contact that occurs naturally with neighbours and that is all the more important when you have survived this kind of disaster together. The following quotes illustrate this:

Since the fire, the immediate area seems to have had a stronger bond. We have helped each other, been closer. Neighbourhood seems like a positive part of life after the fire.

There was always someone there. Even in my lowest periods, someone would just walk in... The help from friends and family was tremendous. They got me through. People I hadn't heard from in ages were ringing and donating things to us. I knew I had a fairly large support base and they came forward quickly.

Some people drew strength from informal groups of which they became a part. Just some examples of these include a group of mothers from fire-affected families whose children attended a school which was itself burnt and who got together regularly to talk things over and socialise; people who were formerly neighbours and experienced the fire together who still get together to socialise or take their families camping; or groups of fire-affected individuals who found it helpful to go walking or fishing together. One group that emerged found their recovery was helped by the creative activity involved in putting together a publication of poetry and photographs about the bushfire and its effects.

The support provided by family, friends and neighbours was not limited to emotional and social support. It also often took the form of practical help such as accommodation, clothing, furniture and goods, or generous financial help. There were several instances given to us in interviews of people providing replacement photos. For example:

Relatives and friends sent photos. Our bridesmaid in Brisbane got copies of our wedding photos and sent them by express mail. We had them by the following Wednesday. Lots of others sent photos too. We've probably got as many photos as we did before.

Beyond the obvious value of this kind of support, it was evident from comments at interview and in the surveys that it promoted recovery because it also let people know that others understood and cared about what had happened to them. A number of people mentioned that their awareness of the generosity and understanding displayed by the wider community had helped to sustain them. Examples were also often given in interviews of 'random acts of kindness', often from complete strangers and in a wide variety of situations. People were obviously significantly touched by some of these acts and remembered them in some cases as turning points in their recovery or in the process of coming to terms with their losses.

On the negative side, some of the interview comments about family, friends and neighbours were consistent with the survey results suggesting that the bushfire in some cases resulted in lasting negative effects on people's relationships, and that these negative effects sometimes made recovery more difficult or more complicated. Examples include relationships affected by post-traumatic stress, depression or persistent anger with public authorities about the circumstances of the fire; financial hardship, disagreement about whether to rebuild; and actual relationship breakdown resulting from different ways of dealing with loss and grief. Relationships sometimes deteriorated also as a cumulative result of the loss and trauma from the fire together with the effects of other non-fire related factors such as illness or a death in the family.

Work and its place in recovery

Many people commented on the help and support they received in their workplace, both from colleagues informally and from management within their work. For example, one

woman we interviewed described how her colleagues, aware that she had lost a very large personal library of books in the fire, took up a collection and gave her a substantial book voucher to help her replace what she had lost. She commented that it wasn't so much the financial value of this gesture that mattered but the sense of generosity and thoughtfulness that prompted the gesture. Another interviewee who lost his house and all its contents told us that within the first couple of weeks, his work colleagues between them bought, borrowed or donated all the furniture and goods needed for a functioning house and gave them to him.

There is evidence that at the more formal level also, workplaces were sometimes extremely sympathetic and accommodating about leave and expectations of work performance in the period after the fire; this lack of pressure was mentioned by some as being very helpful particularly in the early days of their recovery.

As with other aspects of recovery, work related factors sometimes made recovery more difficult. One obvious example is where people actually lost their own businesses in the fire or their workplace was destroyed. For others, their business as such was not destroyed but their computer and business records were lost. In these circumstances, people experienced anxiety and financial loss that compounded the effects of their other fire losses and made recovery that much more difficult.

Perhaps inevitably, there were isolated examples of workplaces having quite unrealistic expectations of people returning to work after the fire, leading to significant stress for some. There were also cases where people lost their jobs in the period around the fire but not for fire-related reasons (e.g. ill-health; redundancy). The loss of employment on top of the fire losses and the associated financial and emotional strains had a severe impact that further complicated or delayed people's overall recovery.

On the positive side, a number of people felt that returning to work after the fire had been an important part of their getting back to life's normal routines and contributed to their recovery.

Key strategies for personal recovery

Much of the information and comment that people offered in our research related to those aspects of themselves as individuals that enabled them to deal with adversity and change and experience recovery.

A number of respondents gave suggestions of what they thought other people could do or what might help or hinder recovery. While likely that these suggestions reflected their observations of those they knew, as much as possible, the analysis reported in the following section gave weight to those most clearly describing people's own personal experiences.

A number of key strategies to promote personal recovery emerged, and for ease of consideration, we have grouped these as follows: returning life to normality and routine; dealing with difficult emotions; making decisions for the future and moving forward; approaching life with hope; having a sense of control and acceptance and engaging in meaningful activities.

Returning life to normality and routine

Many survey respondents viewed returning to a sense of normality and routine as important in helping recovery:

Trying to return things to a 'near normal' state.

To get back to normal as soon as possible.

Return to 'normal' day-to-day routine.

Going about daily routines was seen to help people look beyond their immediate situation.

Going about the daily routine provides confidence about the future.

Getting some normality back into family life – doing sports with children and having fun times so the children see it as 'temporary' situation they can get past.

There were similar sentiments expressed in interviews. For example:

The main thing to get us back and to 'recover' was doing ordinary things – not special therapeutic things. Things like walking, playing...I walk to the top of Mt Ainslie every week.

I think the sheer necessity of getting on with things ...was what got me through.

For some it was difficult to return to get back into a normal routine due to the losses they had experienced:

The ability to return to normal – for farmers the loss of stock through death or forced sale takes a long time to recover.

Not being able to get back into a routine quickly - either because they lost a family member or they have to rebuild.

Lack of funds to restore a normal life.

There was considerable recognition that recovery would take time. Comments included:

Time (to make decisions); Time to re-adjust; Time passing.

Having time to re-establish lives and households.

Time +++; everything takes longer then planned.

Time, I believe is the only answer.

Long-term support from friends and the community...as it takes different people different amounts of time to move on.

Some felt the pressure to return to normal made it more difficult to recover:

Feeling the pressure to make decisions and get 'back to normal'.

People telling us to 'get over it' after 2 weeks.

Lack of understanding in community – those who have not experienced it do not have empathy fail to understand that you cannot 'get over it'.

Dealing with difficult emotions

Different aspects of low mood, such as ongoing restlessness, anxiety or depression, 'pervasive sadness', or less optimism about the future were identified by some as affecting their recovery. Some talked about their anxiety about fires and smoke and hot, windy weather, with a few stating that traumatic memories are not far below the surface. Some spoke of lingering dissatisfaction with their replacement housing and about lost neighbours, a feeling that things could never really be same. Dealing with loss, grief, guilt, or fear made recovery harder for a number of respondents. Some described:

An inability to move on following loss of personal memorabilia.

A loss of identity – inability to refocus on the future.

An overpowering sense of loss and inability to cope, leading to feelings of on-going depression with few opportunities to release it by a sense of progress and achievement.

Grief that makes it difficult to look forward, especially when you have lost everything.

Failure to accept that one did the best one could [i.e., was not able to save property].

Fear – worried in case the same happens again – fear of what may have happened to self and loved ones.

In surveys and during interviews, people referred to a loss of trust or a feeling of disillusionment with government and emergency services, and with bureaucracies (both public and private, e.g. insurance companies) as impacting on their recovery. For others, there has been enduring anger and an intense need to understand the human factors that contributed to the disaster, to have people held to account for the decisions they made about how to respond to the fire and whether the public should have been warned, and this had delayed recovery:

Anger that we weren't told of the impending dangers; that more preparation could have occurred.

Anger and feeling of injustice - 'Why me?'

A deep anger at 'lack of early warning' of the 'severe consequences' of the fire and its 'rapid approach to Canberra, particularly for people out of Canberra [having] no warning to return home.

Anger and a feeling of injustice 'why me'? Why didn't someone 'Government' help us to fight the fire – some lost faith in support mechanism of society.

Being able to reach a point where you 'get over it' quickly. Carrying anger for a prolonged period impeded the ability to move on.

A number of respondents said that it had helped if they could normalise and understand these difficult emotions:

Remembering that it is OK to feel overwhelmed, shocked, fragmented, distressed, guilty (e.g., why not me?), inadequate, woolly-headed, apathetic, angry, frustrated etc. initially.

Understanding of fears about future dreading summer.

Knowing what you are feeling or going through is normal – i.e. validation from support agencies.

Recognition by ‘others’ of trauma, loss, grief, anger and ways of being able to deal with this.

For some respondents, this involved support from others who acknowledged and helped them deal with their emotions:

Emotional support. Understanding the terrible grief that one is going through.

Non judgmental support was important.

Having people to talk to about it, who just let you talk and don’t say things like ‘Well, it could have been worse if...’, or ‘you’re lucky that...’

Talking with others who had similar experiences - expressing the anger, humour, confusion etc.

A peer group that allows an outlet for emotions stress that need to kept out of a family’s life where children are concerned.

Being allowed to grieve - good counselling if required.

Support of family and friends or counsellor who listen as you ‘process’ fears and issues, to assist with regaining an element of ‘control’ over ones life again.

People respected our feelings – they didn’t assume that they knew how we were feeling e.g., when our home was rebuilt some people assumed that the fires had been a blessing in disguise, or that we had been ‘lucky’. It was more helpful when people accepted that we still had very mixed feelings.

Not seeking help or talking about problems was seen to hinder recovery:

I know of a lot of people, men in particular, who tried to pretend everything was alright and get on with things without dealing with their emotions and fell apart a few months later. Thus talking about it is very important.

Unwillingness and embarrassment to seek help.

Being able to accept even if embarrassing.

Not seeking professional help if suffering side effects from the shock and fear of it all.

Being unable to vent feelings of anger, loss and grief.

Some perceived a difference in responses to those who lost their homes, versus those who did not, and that this influenced recovery:

Because we did not lose our home that person was told to 'get on with life'.

Remember, that even if you did not 'lose your home' you still suffered.

Different treatment of those that lost houses and those that didn't.

Those that did not, have lost environment, community and lifestyle and had to live amongst the devastation and construction for many years.

Making decisions for the future and moving forward.

Making decision for the future and moving forward.

To many respondents, making decisions and planning for the future was helpful:

Making the decision of whether to rebuild or sell land and resettle elsewhere.

Making the decision about whether to rebuild or sell and moving forward rather than looking back.

Being able to make a decision about what to do.

Being able to develop a plan for recovery – being able to move forward.

Looking forward not back. Determination to move forward and not dwell in the past.

Looking forward not back. Determination to move forward and not dwell in the past.

Some respondents described what made it easier to plan for the future:

Having the ability to want to put the day behind you and get on and rebuilding our lives.

Plan your next step in life as best you can with your family and then get on with it.

There is not much you can do about what happened and you can only try your hardest to get on with what has to be done next.

A number of respondents found it difficult to look forward to the future:

Overwhelming – unable to see path forward.

Unable to move on because of need to come to grips with what happened.

People need to decipher and make plans to move forward i.e. cut through that overwhelming feeling.

However, some respondents described the challenges and difficulties they experienced in making decisions:

[Needing to have] a capacity and the skills to manage the prioritising and decision making while dealing with the emotional stress.

Difficulty in making a decision on what to do next.

Paralysis by indecision and concern about making the wrong decision.

The importance of making decisions about the future was highlighted by one woman we interviewed. She suffered massive losses as a result of the fire – house, inherited antiques, two cats, a horse, and then her partner left. She felt that she lost everything that defined her. Yet her advice for others, she said, was to:

Have a plan. Even if you're not sure it's the right thing to do, a plan that can set you in a direction, at least to do something, something to get out of bed to do.

Another woman we interviewed found that putting the decision to rebuild into effect was very helpful.

In a way, it was new life coming back.

Approaching life with hope

Being hopeful and viewing the future positively was mentioned by a number of survey respondents as helping recovery:

An optimistic attitude. A positive outlook. A positive attitude to draw on.

A positive attitude that things will get better.

Moving forward positively.

Being very positive about yourself and the situation. Compared to others in the world, who are far, far worse off.

Your own emotional and spiritual strength to enable you to be positive as you go forward into the unknown.

Being able to articulate what you want your life to be from now on.

Having something to aim for in the future – rebuilding.

The excitement of planning a better house.

However, coping with situations related to the disaster were identified by others as making it more difficult feel hopeful and delaying recovery:

At our age, the sense that there is no chance of fully recovering in a material way.

The loss of a loved one, loss of personal items, photos, mementos, personal gifts from parents/grand parents and no home – ‘Where to from here?’

Losing control of the direction you’re taking, uncertain of the future.

Being unhappy about where you are being placed to live, and not being treated very well by ACT Housing at the time.

Financial and emotional inability to re-establish oneself.

Lack of financial resources to be able to have choices about what to do.

Living with the constant reminder of everything that’s been lost.

For some, recovery was related to changes in the environment, either helping them to feel hopeful:

It has taken a long time, but seeing this area starting to regenerate. However, it will never be the same and there is sadness there at the loss of such beauty.

The regrowth of grass, new plants and trees recovering.

Seeing the garden slowly recover.

Seeing new growth, both in nature and in construction.

Others saw destruction in the environment as making it harder to feel hopeful

Moving on – it is hard to do so when the area so beautiful once with the pine forests and nature.

Destruction of dwellings in the area and massive changes to the surrounding environment in terms of destruction of trees and bushes.

Having a sense of control helped a number of respondents:

That it is possible to move forward and (albeit with support) take as much personal responsibility to ensure that happens, and

A sense of control and progress – being able to do something or believing something is being done to ‘make progress’ and to move on.

Several respondents compared being a ‘victim’ with being a ‘survivor’ and having the capacity to take control and feel empowered. For example, responses included:

Determination to overcome adversity and get on with life – personal coping skills and refusal to be a ‘bushfire victim’.

Viewing yourself as a 'victim'. We preferred to look at ourselves as 'survivors' who wanted to get back to where we were.

For some respondents, 'acceptance' of their losses and feelings was important in helping them deal with the experience, possibly in relation to the things they could not control:

Acceptance of the situation, a new challenge.

Acceptance of the fact that it happened and much as you are devastated by your loss realising that we still have [at least some of] the most important things left in our life.

Accepting that natural disasters happen and regularly and are not necessarily anyone's fault.

Acceptance of the vulnerability of the situation and that these feelings are the nature of natural disasters.

Coming to terms with the situation and accepting the only way is forward.

One interviewee described her experience this way:

I feel like we've been through something really awful but we've come out okay, with our relationship strengthened. If the fire was taken away so might the positives that came out of it...I've realised the importance of not taking things for granted.

Another interviewee expressed a sense of acceptance in these terms:

My summary of the whole thing is 'such is life' ...I certainly wish it hadn't happened but you have to work with the cards that are dealt to you and get on with it. I think there are a lot of people in the world who've suffered more than I have and still managed to get on with their lives, for example refugees. This attitude has really been a strong coping strategy for me.

Focusing on values and redefining what's important

Focusing on values and redefining what's important helped some people to accept what they had been through. The following responses from the surveys illustrate this:

We have to come to terms with our losses and accept the fact that our possessions are really not that important.

Realising that there are many others who are far worse off and seeing if you can help in some way.

A sense of perspective. What happened in the bushfire was unpleasant – but we are much better off than most people in the world, especially those in Iraq, safer etc.

If you have previously more serious problems such as health problems, bushfires seem insignificant.

Some of those we interviewed considered that one positive effect of the fire had been an opportunity for personal growth such as appreciation of spiritual rather than material aspects of life. One interviewee talked about the fact that until the fire, he had been very preoccupied with possessions, but that having lost his house and all his material goods, he has changed, has different values:

I had some traumatic times but on the whole, it hasn't been too bad. ..I feel the fire overall has been a positive experience and I've come out of it probably a better person...used to be 'into possessions', an avid collector of things, but I'd say I'm now much more aware of the importance of living in the moment. I also feel more prepared for death, not in any depressed or morbid way, but just recognizing. This is probably the result of nearly dying in the fire...I now find it more important to be than to have.

Other interviewees echoed this kind of response:

I thought when everything was burning all around me ‘Well all that’s gone’...but it doesn’t matter because in the end, the important things are those that can’t be burned. After the event was like a release .if you don’t own anything, you don’t have any hassles. Everything happens for a reason. I felt I grew from it...I lost all my beautiful records and books. I can’t be bothered now. I still see beautiful things and appreciate them but I don’t need them. I had a collection of towers from all over the world. They were all destroyed. I realised having them didn’t matter – it was the memory of going to those places that mattered.

Engaging in meaningful activities

Involvement in meaningful and pleasurable activities assisted some people in their recovery:

Journal recording, leisure/fun etc

Doing some relaxing – things such as swimming, praying, meditating etc

Returning to enjoyable activities, painting, sport, movies etc

ACTIVITY! Keeping active – keeping the mind and body busy.

Set goals – if you can’t rebuild or replace what you had focus on things you can do such as going for a daily walk, joining a gym and getting fit

Being able to return to a sense of normality and routine where life is more predictable

Recognising the likelihood of difficult emotions and dealing with them

Making the decisions that need to be made in order to move forward

Being able to feel hopeful about the future and respond positively to the perceived future

Assuming control of the things that can change and accepting what has happened

Engaging in meaningful and pleasurable activities

Realising that recovery takes time

The strategies that individuals themselves identified in our research appear to match some of the findings of other research. For example, they reflect recovery in the sense of individuals being able to pursue their ‘hopes, dreams, and aspirations and goals’ (as described by Davidson et al. p. 486), despite the presence of enduring challenges and negative effects of the disaster. Not surprisingly, dispositional characteristics such as having low personal hopefulness and using avoidance coping strategies were found to be strong predictors of psychological morbidity for people two years after the Newcastle earthquake (Carr et al 1997b). And finally, construction of meaning is an active process that appears to affect the outcome of traumatic experience (Ursano, McCaughey, & Fullerton cited in Norris 2005:11)

Factors relating to the physical environment

Changes in the physical environment (both built and natural) have been an ongoing reminder for many of the damage and loss resulting from the bushfire, and were mentioned as a factor delaying recovery. As we observed earlier in this report, one aspect people particularly identified was the devastated look of their suburbs, including the way their immediate environment was changed by the loss of trees and what a number of them saw as the intrusion of large new houses in place of previously more modest dwellings. The following comments from our interviews refer to this aspect:

I no longer feel at home in my environment. My suburb has changed beyond imagining. It has become a treeless landscape full of mansions.

However, I think one of worst results of the fire and then rebuilding on the same block is the loss of privacy – we’ve gone from a lovely secluded retreat of a backyard to an exposed one overlooked by half a dozen huge new

houses, and we also have problems with water leaking into our yard from houses above, with flooding on occasions.

Now, given the McMansions they have put all over these vacant blocks, there is no garden. We had a beautiful micro-climate in the back yard before the fire. We had finches, king parrots, cuckoo shrikes, all sorts of birds would come in. Since the fires, the corridors have been broken down, particularly for the smaller birds, and we haven't got them coming in anymore.

I had lived all my life in the house – looked out onto the same green. Now dead and burnt. No birds, nothing green, ugly houses, all new neighbours. No life around.

The damage the bushfire did to their gardens was a focus of loss and sadness for a number of people. They talked about the distress of losing their gardens and the years of work that had gone into the making of them; for some, accepting the loss of their garden was the most difficult aspect of recovery. Some older people commented on the physical difficulty of re-establishing a garden:

The loss when you are older is difficult to cope with...life without a garden broke me.

For some, engaging in rebuilding a garden was mentioned as contributing to recovery, and others saw the building of large new houses as evidence of growth, a fresh start. These were stated in surveys as examples of factors that had helped their recovery:

The regrowth of grass, new plants and trees recovering.

Seeing the garden slowly recover.

Seeing new growth, both in nature and in construction.

To see the green emerging was good.

Similarly in interviews, some people talked about the pleasure of recreating a garden and about how evidence of new life and growth helped them to be more hopeful generally.

*It has taken a long time, but seeing this area starting to regenerate...
However, it will never be the same and there is sadness there at the loss of
such beauty.*

*Fixing the garden...creating something new. It's different (from what it was)
but as good. The first time the garden started to look green – (felt as if...)
things were going to be OK.*

*I get a lot of pleasure from the garden. I've focused on that rather than
what's inside?*

The impact on the bushland and fauna around Canberra e.g. in Tidbinbilla was mentioned frequently as a factor affecting people's recovery. This comment is typical:

*Moving on - it is hard to do so when the area so beautiful once with the pine
forests and mature.*

One interviewee spoke with great feeling about the importance for her recovery of observing new growth and regeneration. She spoke of it in these terms:

*Things change [for the better] when you think you have a grip on things.
For us, it was getting a handle on what had happened to the environment
and realising that we would never see it the same in our lifetime. The birds
are gone, the animals are dead. You know when look up for those big trees.
But you've got to look down in the undergrowth and it's all there. It's all
growing back there again. You've just got to look forward 200 years... We
started to get a handle on it the first spring.*

*And going back now, we are doing bird surveys – and every time we go back
there is an exponential growth of new birds there. But you've got to do that.
You've got to get out of that shell of destruction and start creating new
things. Where there was one lyre bird there are now four.*

You've got to make hope. When people were being pulled out of the blitz and the tsunami... But to have hope, you have to have facts. For me, it was the botanical facts...A lot of the park groups went into a total spin. But nature's marvelous. That's the other thing – you've got to understand the nature of the vegetation in Australia is that it's a fire recovery [landscape].It's about regrowth, rebuilding. Of all the plant species, all have recovered apart from two species.

Summary

In examining what help and hindered recovery, it was apparent that a combination of factors affected the recovery process. Generally the participants were very positive about the Recovery Centre and the role it played in the community. It was apparent that participants used a variety of services during the post-disaster period and most were helpful in the recovery process. The self-help and personal strategies were also important in this process. It should not be forgotten that for many of the participants the environment was an important context issue. For some seeing it rejuvenate was inspiring, however, for many others it was the loss of the environment they felt keenly every day and constant reminder of what was lost.

In the next Chapter we turn our attention to communication and the media and how that helped or hindered the recovery process.

Chapter Seven – Communication and media

Introduction

This Chapter examines communication and information provision to the community as part of the recovery process after the bushfire (information provision via the Recovery Centre has been discussed in the previous chapter). Communication strategies of government and community groups were to be explored in depth and analysed to develop a model for effective communication approaches for communities in recovery. As the research progressed, it was seen that an examination of media coverage of both the disaster itself and subsequent stories on recovery were vital to an understanding of both the overall communication effort of the ACT Government, and the role played by the media in its own right in community recovery, so questions were included in both survey and interview stages of the research to address this.

Also in this Chapter data is examined on determining what kinds of stories and other material in the mass media people find helpful as they recover from a major disaster, and what kinds of stories and other material the mass media should avoid or be sensitive in covering.

The first role of the media is to represent the disaster to the audience, in this case the ACT and beyond, fairly and responsibly. While the media does have a role in the channelling of information to those directly affected to assist in the recovery of individuals and their local community, media managers will view their needs as secondary to those of the wider audience. Nevertheless, an indication of what helps recovery and what doesn't will be useful to EMA and to the media.

As well, many respondents' understanding of 'media coverage', 'government communication' and of the survey's emphasis on *post-fire* information provision was frequently over-ridden by their desire to express their views about the lack of warning before the bushfire reached ACT communities, their desire to tell their stories of the day of the fire, and their feelings about the Coronial Inquiry.

The nature of communication

It is important to see communication in recovery as not merely information-giving. Best practice communication in recovery after disaster is a two-way process of giving information and receiving feedback on that information, allowing both information and/or policies/resources referred to by the information to be modified and improved. For example, information on building advice may be given in a leaflet distributed to affected people; these people may then tell the authority responsible for the information that they need different information, or they need it in a different format. If this feedback is acted upon, there is a two-way flow – communication rather than mere information – resulting in an increase in both the value of the information and the satisfaction of the information receivers.

Information, communication and recovery

EMA's *Manual No. 10: Recovery*, has a chapter titled 'Community Recovery' which contains brief instructions on the delivery of information to communities in recovery after disaster as follows:

The community recovery information services provided to affected people aim to lower anxiety levels and to restore a sense of predictability through accurate, credible information that services are available to assist and hasten recovery as well as the means of accessing those services... The information should be available as soon as possible and provided and repeated through a range of information means. (EMA 2004:73)

The manual then enumerates the different media channels that should be used to distribute information: leaflets, posters, newsletters, information centres, recovery centres, community agencies, radio, newspapers, television, outreach visitation and public meetings (note that 'new media' such as email, websites, mobile telephone text messaging etc are not mentioned); but does not elaborate on what kind of information should be given, nor the best methods of utilising these channels.

The concept of deliberately seeking and utilising feedback regarding information is not mentioned in this section, although EMA's Strategy 4 refers to quasi-governmental

community recovery organisations (such as the CERG) set up to elicit intelligence from affected communities:

Constitute a community ‘sense organ’ by convening groups and existing community networks, enhanced by representatives from disaster recovery services, to identify differences as they emerge before they become cleavages. If responded to piecemeal, they are less likely to be defused than if the broader pattern is the basis for intervention. (EMA 2004:133)

The community recovery chapter concludes by noting that the accessibility of the information to the people affected by the disaster is a major issue and actions need to ensure it is available to:

- The whole of the affected area
- Non-English speaking people
- Isolated people and communities
- Secondary victims (EMA 2004:73)

This research contributes significantly to a better understanding of recovery communication and extends the concept of ‘community recovery information services’ by revealing the shortcomings in the manual’s prescriptions. Later in this chapter we address media issues in the recovery process.

Community Update

Many respondents mentioned *Community Update (CU)* in answer to other questions about recovery communication. A set of questions sought to find out how people obtained *CU*, what they thought of its content, and what could have been improved. The most common method by which people received copies was through the post (99.8% n=431). People obtained copies additionally through the Recovery Centre (14.4%), local shop (7.2%), and via the Internet (4.6%). In terms of frequency of receiving *CU*, 89.8% (n=449) said they received the newsletter regularly.

There was a wide range of responses regarding content of *CU*. 84.4% and 83.7% (n=430) said news about upcoming events, and information about support and grants schemes respectively were helpful or very helpful. 68.1% said information on finance and insurance was either helpful or very helpful (n=420). 67.5% said information on demolition and rebuilding was either helpful or very helpful, and 67.3% said stories from other affected families were either helpful or very helpful. Articles about public health issues, counselling services, gardening, bush regeneration and Lucky the Koala were generally well received, with 'helpful' or 'very helpful' responses ranging from 75.1% to 73.8%.

Messages from the Chief Minister, Jon Stanhope, and other ACT spokespeople were regarded as unhelpful by 34.5%, and helpful by 39%, while 19% did not remember seeing such messages (n=426). More than half the respondents said they kept *CU* as a reference (n=453), and of those who remembered seeing articles in *CU*, 94.9% (n=398) said articles overall in *CU* were either helpful or very helpful.

In the qualitative responses about what *CU* could have done better, most respondents liked the newsletter and did not find fault with it:

Not a thing – thank you so much for a thoughtful publication.

Nothing – excellent publication.

Well done. Informative articles at all times.

Tried to provide all sorts of information for every affected person.

I thought it was great and have kept all copies as part of my bushfire memoirs.

The most frequent criticisms related to timeliness, and what was seen as ‘government cheeriness’ with a corresponding lack of community input:

We often did not get it through the post until after the advertised events had taken place.

Delighted with Community Update and relied heavily on it but for about 6 months.

Was always 3 days to a week late after the events had finished.

Could have been less of a ‘feel good’ propaganda tool for the ACT Government.

Cut out the political hype of ‘feel good’ stories

Provided a community forum, e.g. letters, sharing information, even recipes. The ‘community’ had very little input.

Been less of a government publication and more of a community one. Showed some government bias. Promoted government ‘spin’ in some areas.

At times I felt the stories were attempting to be ‘too happy’ for the time frame i.e. we were all recovering – at times it was out of sync with the larger bushfire community which was very irritating at times. You knew it was a government run newsletter not a community run one.

Some respondents thought *CU* should have finished up earlier, some later. Some felt that the issues covered neglected certain groups, or focused too heavily on particular interests, for example, ‘*Not focus on certain families more than others – found this upsetting at times when we were having so many hold-ups to progress.*’ There were a few criticisms of content lacking in accuracy regarding discounts or building costs, and some respondents felt that those who had not lost their houses but had suffered other kinds of losses were neglected. The overall view, however, was that *CU* was a well-used

and useful resource, but one that that could have benefited from more community input and less ‘political’ content.

Other sources of information

Other sources of information and communication included in the survey were the Canberra Connect call centre, the Bushfire Recovery website, advertisements in *The Canberra Times* and community service announcements on TV and radio. None of these sources was regarded as particularly helpful and each had relatively low usage. Notably, the recovery website was little used by respondents (71.6% n=479 did not use the website), although suggestions for improved communication (see below) often mentioned the value of a website.

Questions relating to bushfire awareness were widely misinterpreted by respondents, who used the question as a means to criticise the lack of warnings pre-18 January. Television scored slightly higher than other media (54.6% n=469) as a source of helpful information about bushfire awareness advice over the two summers following 2003, but in answer to the quantitative question, ‘If you heard any community service announcements, for example bushfire awareness advice in summer 2003-4 and 2004-5, how would you rate them?’, respondents added spontaneous critical qualitative comments such as, ‘Why should I trust govt announcements?’, and ‘A bit late.’

Questions about availability, timeliness and understandability of information on recovery from the ACT Government elicited mixed responses. The following figures relate to those who used the information provided:

<i>Availability (n=383)</i>	<i>Available or very available 68.1%</i>
<i>Timeliness (n=388)</i>	<i>Usually or always timely 49.7%</i>
<i>Understandability (n=411)</i>	<i>Usually or always understandable 73.4%</i>

Regarding timeliness, of those who used the information, 27.1% said it was too late to be useful. In terms of the ACT Government’s response to contact, 53.5% (n=465) of respondents said they did not make contact. Of those who did make contact, 57.4% said they either usually or always got a good response. 41% said they got either no response

or a poor response. Many respondents added further comments to this question, including the following:

I got no response or a poor response – ACTEW Urban Services. I usually got a good response otherwise (including ACTPLA).

Not impressed by lack of timely response (at times) by ACTPLA. I wrote to – and was visited by Mr Simon Corbell – who did initiate action to get vacant blocks developed, clean up done, and footpaths rebuilt – 12 months later – further ‘encouragement’ is required.

Still waiting for issues to be resolved in our neighbourhood.

Information about rebuilding on Narrabundah Hill was included in Community Update. Appropriate ACT Government Department had a lot of difficulty telling me where this was!!!! Also claimed to have no knowledge of information contained in Community Update magazine.

Other useful information not provided

The question asking if there was any information about recovery that was not included in the information provided by the ACT Government called forth a large number of critical responses relating to the lack of information *before* the bushfire. Of those who answered the question, many stated that they required an explanation as to why and how the bushfire occurred in order to make sense of the event. However, the majority of answers indicated that respondents did not require further information.

Some respondents asked for more information on specific aspects still affecting them, relating to both short-term – information they would have liked to have had immediately after the bushfire – and longer-term – information still required. Some requests were general and practical in nature, some very personal and specific. A representative range of these responses follows:

The road closures in the rural areas – it was never clear if rural lessees were allowed to use these roads which were barricaded off. Little

information provided – all word of mouth – about fence repairs on road sides and little information on the removal of burnt and dangerous trees.

We managed with plastic and gluing broken tiles together for a temporary roof but would have liked to have known where to get a tarpaulin.

Specific detail as to when fuel levels would be reduced on government land adjacent to houses in our neighbourhood. The fire hazard is still with us.

Information from insurance companies and legal advice regarding entitlements. Information from banks regarding loans, existing and new. Information regarding cost of building and advice about how to go about it. Lists of builders and architects. Summary of kit homes and availability.

I really wanted to build an environmentally friendly home, but it was hard to get clear advice on issues such as re-use of grey water, solar hot water etc. The government people were keen, but the system isn't really geared to supporting people through the process in a practical way. Hopefully the ACT government is continuing to develop its programs in this area.

Information on our rights (virtually none!) in regard to the development and plans for neighbouring properties.

Knowledge of a disaster plan and assembly centre would have been an advantage at time of evacuation.

In case it happened again, I would like to have someone advise me how fire-safe my property is and what I can do to improve it – and things a pensioner can afford to do!

Some mention of delayed effects would have been good. I thought I was okay for quite a while and then everything fell apart. If I had known it was coming, I might have dealt with it better.

Professional, up to date research about recovery (with the singular exception of Rob Gordon) was simply not available for adults. The web site could have been established earlier and provided this.

I should have made use of the family counselling (wasn't aware of it) then perhaps we may not have separated 18 months afterwards.

How to help adult male family members.

A few respondents, satisfied with the information they had received, indicated what it was that they liked about it:

I was actually very impressed with the government response. It was fast, accurate and beyond what I would expect from any government agency.

Felt all of my issues were addressed in a way that offered respect and no judgment of me or my situation.

I think it was all more than adequate the way it was covered off.

Other comments on communication and media

The final question, asking if there was anything else respondents wanted to say about communication and media since the bushfire, brought forth a very wide range of responses, many of which repeated earlier comments referring to pre-bushfire information and media, and commenting negatively on the Coronial Inquest process. One positive response expressed gratitude for the overall community response after the bushfire:

Canberra (& Oz) community fantastic. That needs to be communicated. A big thanks from 'victims'.

Another acknowledges lessons learnt:

The booklet advising how to prepare was most informative – we now keep spare radio batteries as we lost power after 2pm so knew nothing for 24

hours from media contact. Also lost our landline phone, I do not have a mobile phone.

While some respondents were grateful for media community announcements about emergency warning procedures, others found the sound of the warning siren used in the broadcasts very stressful. Some found later ‘burn-off’ activity distressing, and there was a range of responses regarding bushfire and smoke warnings.

I am pleased that the radio station always announces burn offs and reasons if there is smoke around.

It is vital to recovery that there is clear and easily obtained information regarding any other bushfires, burn offs, smoke. The telephone directory is not clear on who to call and radio stations do not necessarily provide regular updates.

When the forests were being cleared and then ‘burnt’ after the fire – this caused a lot of pain with memories and fear. This should have been covered by a large media campaign well before the burning to warn people. It hit raw nerves.

I wish the media would be quicker to notify the public about smoke in the ACT (like the Wagga fire) as this makes me feel very unsafe and I become very distressed. More timely media info might help this.

Found the radio and TV announcements that used the sound of that awful warning siren (to direct people what to do when they heard it) very distressing. Don’t think I will ever get used to that sound! Every time it was repeated in the advertising it ‘transported’ me back to the afternoon of the fires and I usually burst into tears and felt quite ‘shaken’.

Information about emergency events and smoke haze has been inadequate, particularly given how sensitive many Canberrans now are to fire – for example, when the townhouses in Yarralumla burnt down in Dec 05 there

was no information about it all on the Canberra Connect website or the ESA or fire brigade websites or any news sites. The news sites only had information 2-3 hours later. I think the internet should be used more effectively in such situations. It would also lessen the phone burden. All smoke haze events should also be placed on the internet.

Respondents also offered a number of suggestions about how to manage any future emergency and recovery process:

There needs to be a simple, clear and well advertised way of communicating with all residents in the event of an imminent emergency.

Please remember, many people are so busy after a fire that they don't have time to read newspapers and don't have a radio. It was about 2 weeks before we knew of the Recovery Centre. Placards put near the escalators at the major shopping centres would have reached more people and quicker.

You need to realise that not everyone listens to local radio stations. Radio National should at least direct listeners to local stations in a time of crisis.

A central spot where all information could be found would be excellent.

Perhaps including articles from papers.

Need more focus put on education and prevention where possible as well as analysing what happened.

I would like the TV stations, during their weather forecast to inform viewers of the fire danger rating. Not just telling you – with pictures for the hard of hearing.

More fire hazard mapping and involvement in the Community Fire Units needs to be encouraged.

Some respondents expressed a fear that Canberra residents were no longer taking fire risks seriously:

Expert's reports to ACTPLA after Jan 03 named the suburbs and streets most prone to a bushfire attack in the future. Residents in these areas seem to know little about reducing their risk.

I must say that the warnings about what you should be doing each summer to prepare for fire season seem to be going unheard. People now seem to think it will never be allowed to happen again.

Some respondents indicated that understanding brought about by information assisted in recovery, a point that was made frequently in relation to the Coronial Inquiry:

Catalyst was the only program (and one on ACT ABC-TV) which really helped in understanding what had happened, but were lazy on the 'why'. I found that an understanding of what had happened (climate, green matter) was helpful towards recovery.

Others suggested that they are inundated with information and have had enough, or are tired of media focus on the bushfire:

I still cannot listen to 'anniversaries' or 'beat ups' about the fires.

It was occasionally difficult wading to more news about the fires for many months after the fires. I understand the fires were a big story for Canberra but it was not easy being at the centre of what was constantly headline news.

The bushfire communication and media since Jan 18 2003 has been 'pretty full on' – I turned it on and off depending on my mood. 3 years have passed.

*I try not to read about it in the media. I do not wish to be reminded!
I think the bushfire warnings in 2005 have been too frequent. An over awareness almost causing fear.*

A large number of respondents mentioned that delays to the Coronial Inquiry, and the lack of warning and/or conflicting information on the day of the bushfire, are continuing to affect their capacity to recover:

‘It was the lack of preparation, communication and support prior to the bushfires which was the main issue for many of us.’

‘Citizens need to be informed at all levels. It is not a case of alarming us, but allowing us to take the right and necessary precautions to help minimise damage.’

‘1. The investigation should be done and seen to be done well. 2. I hope the intended warning systems work in the future.’

Summary

Findings from this section of the survey are indicative of the great variety of responses of bushfire-affected people to their experience of the aftermath of the bushfire and their journey of recovery since 18 January 2003. With regard to government communication, strong majority responses of appreciation for the Recovery Centre, *Community Update* and the efforts of recovery workers are evident. While broad indications can be discerned, the findings do not warrant over-explicitness in recommendations regarding good, poor, useful or unused communication activities as many responses are contradictory.

A number of respondents’ testimony is affected by their response to the absence of warning on the day of the bushfire and to delays in the subsequent Coronial Inquiry process. However, what does emerge from this section of the survey are themes of:

- the desire on the part of respondents for consultation;
- for community input and government response to expressed needs;
- the provision of trustworthy information to affected people to enable them to make their own decisions
- deliver the responsibility of decision-making to them; and the widening of the base of accessible communication.

It should be noted that in many cases, things that respondents asked for *were* provided. The fact that this was not known by respondents, or not known until after their need had passed, indicates that better dissemination of information about available services and resources may be required in future. It is also the case that people do not notice information until it is salient to them. Timeliness of information provision needs to be addressed. More repetition of information, accompanied by an explanation about why it is repeated, would be useful. Trust and credibility issues were raised, suggesting that information and advice should be attributed to credible sources. Information or comment identified as coming from political sources was widely regarded as untrustworthy, propagandistic and deemed unhelpful for recovery.

Media usage for recovery-related information

The first question in the Media and Communication section of the survey asked respondents which media they have relied on for information since the bushfire. This was designed to go beyond the standard methodology used for ratings surveys, which generally seeks a snapshot of an audience's media usage at a particular time. There are two salient differences. Firstly, the question assumes an active audience, one that is deliberately seeking information, rather than one that uses the media as entertainment or as background for other activities. Secondly, it asked respondents to make a judgement of usage over a period of time.

Respondents were asked to assess their reliance on the following scale: Never used; Hardly ever used; Used regularly; and Used heavily. During analysis, the first two the last two were combined in order to minimise differences resulting from subjective factors. The people who did not respond to this question was included in the percentage analysis in order to judge the media usage of this audience under these circumstances in a realistic manner.

This result contains a number of surprises. While the dominance of the local newspaper, *The Canberra Times*, might have been expected, its relatively narrow margin over the two ABC networks, television and radio, will be of interest to an emergency manager anxious to place information before this audience (72%, 65% and 55% respectively). Free local newspapers rank next at 43% and commercial free to air television at 39%.

Our results confirm the rising importance of the world wide web and the internet, which is used regularly or heavily by 31% of this audience. Brochures or flyers were a significant source of information for 25%, a figure that might reflect usage of the recovery newsletter, *Community Update*, while direct telephone enquiry ranks at 22%. Usage of special interest publications and local commercial radio were both 19%, less than might be expected, while public notice boards were used by 11%. Newspapers, flyers and mailbox letters/flyers from Recovery Centre by mail were the most influential and a reminder to us of their importance.

Local community radio, which is important to multi-cultural and minority groups, is used by 7% of this audience. The total 'Used Regularly' and 'Used Heavily' response was 2024, or 4.16 X n, consistent with an audience that is not relying on a single source but is monitoring a number of preferred sources. This clearly has implications for the recovery process that multiple sources of communication channels are used by those affected in any disaster.

A bushfire-affected audience

In order to make an approximate comparison between the media usage of this audience and that of an average one, we compared the results with those of the Australian Social Attitudes Survey (Denemark 2005:223). There are a number of differences in methodology between the two surveys that make a direct comparison difficult, however there is a strong possibility that a disaster-affected audience is significantly more reliant on newspapers, radio and the internet than a normal Australian audience. It relies less on ABC TV for this type of information and significantly less on commercial television. The comparison also indicates the possibility that talkback radio is more significant for a disaster-affected audience. Because of the different methodologies, it is not possible to quantify these differences, but this result does indicate a need for further research.

Respondents to this survey are people who have survived a major disaster and have become a different audience to the norm. This audience is more active and less passive, seeking information and discriminating between media sources of information rather than accepting what is offered.

I haven't turned (ABC local radio) off since that day. I used to listen to [commercial radio] but haven't since.

Very aware of high fire danger periods and the weather in summer. Don't like being away from the house, especially on hot windy days in summer. On these types of days I stay 'glued' to the ABC Radio (666) for weather reports etc.

On the other hand, the effect of the bushfire on some respondents has been the opposite. Instead of becoming more active, they have disengaged from the media, at least to some extent. For these people, media coverage is an unwanted reminder:

To be frank, I chose NOT to listen, read or watch any media coverage. It was all distressing and I wanted to actively manage my emotional state to keep equilibrium.

I find everything about the fire except information on where to get financial assistance and counselling assistance distressing. I do not want to read children's poems or short stories about the day.

I can't read about what's going through the courts. How many years has it taken and how much money? That money could have gone to all those people who had no insurance instead of that nonsense.

It was a bit scary seeing it on TV. TV shows were from the outside looking in. I was on the inside looking out.

This does have implications that for many 'survivors' of disasters that they are 'turned-off' the media and no longer listening to messages.

Types of media content that were helpful

The types of stories that these recovering victims or survivors of this disaster found most helpful were television or radio features (70.2%), by a margin of ten percent over interviews with other residents or experts (60%). Features and interviews were followed

by media comment and editorials (45%), letters to the editor in newspapers (41%), stories in magazines (36.7%), interviews with government ministers or officials in any media (33.7%), and talkback radio at 31.8%.

Features are the result of research, finding and interviewing sources including residents, officials and residents, and present complex and often conflicting opinions and information in a comprehensible way (Conley and Lamble 2006:315). It is not surprising that features will make more sense of an event such as a disaster than the elements that go into them – anecdotes, interviews and comment. The interesting finding here is that features in the electronic media seem to be more helpful than similar material in the print media.

Types of media content that were unhelpful

Looking at the ‘Unhelpful’ response, a slightly different picture emerges. Respondents indicated that the most unhelpful type of story in the media respondents indicated were interviews with government ministers or officials in any media (35.5%), which was the only type of story that more people found unhelpful than helpful. They rated more than twice as unhelpful as letters to the editor (17.5%), which was followed by interviews with other experts in any media (15.2%), interviews with other residents in any media (14.6%), media comment and editorials (13.3%), stories in magazines (12.9%) and talkback radio (11.9%). As one would expect, TV or radio features was the least unhelpful type of story in the mass media (8.4%). While the usage of internet blogs and chat rooms was small, it is interesting that, of the people who used them, more found them unhelpful than helpful (5.1% and 2.9% respectively).

According to the EMA, elected representatives (politicians) have a duty to play an important part in assisting the recovery of the community (2004:55). What is difficult to judge is how much the controversy over the Coroner’s Inquiry has affected respondents’ views of the role of politicians in providing quality information at the early stages of the recovery process. It should be noted that some of the respondents felt that politicians’ contributions were helpful at the time.

In order to analyse what this audience regards as helpful and unhelpful within the above typology, we turn to the final two questions in the media section. These are qualitative,

asking simply for respondents to nominate individual instances of mass media coverage they remember as ‘particularly helpful’ (Q.103) and ‘offensive and unnecessarily distressing’ (Q.104).

It seems that many respondents were able to remember instances of helpful and unhelpful coverage even if they were unable to identify them unambiguously. There were several blanket responses, such as:

Coverage by local ABC Radio and TV has been excellent, as has (named journalist’s) reporting in the Canberra Times. Feature stories in interstate newspapers are often more informative than the local media.

The media’s ability to place other people’s stories in the public domain was appreciated by many respondents to Question 103 as helpful as a way of validating their own experiences:

Stories of those who were “moving on” in whatever way – dealing with their trauma, recovering, rebuilding etc. All those examples of how crises being out the best in people: ordinary people doing extraordinary things.

Publicity about other peoples experiences helped us take a more positive view of our own situation. Information about assistance available was valuable.

A letter to the editor, Canberra Times from someone who lost their residence in the fire. It was very spiritually uplifting.

A few interviewees reported the benefits of sharing their own experiences on the public platform the media provides. This was usually by way of letters to the editor:

I wrote to the papers saying I was impressed with the way government handled things. I got a lot of positive feedback from people for saying that.

Others were very angry that I had said something positive about government.

The value of this kind of shared experience was confirmed by some interviewees:

A couple of channels put footage together and they showed it at the National Museum 3 or 4 months after the fire. ... It was very traumatic but ultimately we found that very very helpful. No one moved for 3 -4 minutes afterwards. Later we reflected on it – how important it was to see how big the thing was.

One interviewee, however, felt that the media could have done more. It could have played a really useful role in educating the broader community about where the bushfire affected community was likely to be up to, and to help people understand what was normal in their recovery process, including information from people who know about these things. They considered the media basically let the community down. Another thought that the media created a false expectation of recovery:

Sometimes I thought the communication was overly sanitized, forced cheerfulness, wanting to be positive and helping people recover but there is a point where the forced positiveness in the light of something that's terribly bad is actually counter-productive.

Some survey respondents found that stories analyzing the cause of the bushfire and how it resulted in a large-scale disaster helpful; to others it was a continuing irritation:

Special features on television following the fires documenting the extent of the damage, seeking to explain how it occurred – gave me better picture of the issue.

Continuing arguments over cause of fires and the coroners hearings. Would prefer to have the coroners report finalized before media can report. This would reduce the sensationalist approach being used.

This reflects one of the main findings of this investigation, that no one factor emerges as helping or hindering every affected individual. One factor might help some and hinder others. Another theme was the media's concentration on urban issues, ignoring rural ones:

A lot/too much emphasis on urban areas affected by the bushfires. Not enough on rural/small outlying areas of the ACT.

The cleavage plane concept

During recovery, the different experiences of people within the affected community can give rise to what the EMA describes as cleavage planes (EMA 2004:126). Examples of cleavage are those who lost houses versus those who lost other possessions, those who were insured versus those who were not, those eligible for assistance versus those who are not, those who remained during the emergency versus those who did not, those who intend to rebuild versus those who do not. The concept of cleavage planes will be used in analysing the examples of media coverage that follow.

The Canberra Times

Overall, the main local daily newspaper, *The Canberra Times*, identified as the media outlet most relied upon, was singled out for praise by over 30 respondents to the survey and criticised by very few. Typical comments were:

The Canberra Times has been quite supportive. ...the fact they kept the same reporter working on the bushfire story has been very helpful. They've got a reporter who knows the issues, knows the background. I think that's been very important.

The Canberra Times initial coverage and information for people affected by the fires was very useful. Some letters to the editor (in papers) were useful, if constructive but others, I found whingy and unproductive.

The Canberra Times published around 250 bushfire-related stories during the recovery period in 2003, beginning with the announcement of the opening of the Recovery Centre

on Friday 24th January. A detailed analysis is beyond this study, but one which appeared on 30 June 2003 is typical. Following quotes from a local builder, the story adopted a survivor-oriented point of view typical of recovery human interest stories:

(The builder) said the colonial-style home was testimony to what could be achieved when clients and builders worked together. 'This consultative approach is something that we continue to stress to people in terms of ensuring that homes are designed and rebuilt within the budgets available,' he said. ... For the (owners), it ends a period of high emotion which started with the bushfires... and finished with the joy of moving into their new home...

Also at Saturday's party were members of the Gang of Ten, a group of neighbours including the (owners) whose homes were destroyed in the fires and who have met every Friday since to have dinner, exchange ideas and help each other through the loss. One of the couples, (named), hope to have their home rebuilt by March. (Husband) said the Friday night get-togethers had been crucial in their recovery. 'It's been very therapeutic,' he said (Doherty 2003).

This story conveys several recovery-related pieces of advice, such as, be realistic with your rebuilding budget and consult with your builder and architect; a period of high emotion and discussions around that are normal; and it's possible to rebuild quickly, but also natural to take much longer. Thus, the danger of exacerbating existing cleavage planes was avoided, leaving the possibility of the reverse, a reduction in tension.

The ABC's Stateline program

ABC TV broadcast a series of short features in its regular Friday *Stateline* program in 2003. They were referred to generically as helpful by eleven respondents and criticised by none. In one example, broadcast on 21st February, Robert de Castella talked about the loss of his Chapman home in the Canberra bush fires. Recently appointed to the Recovery Taskforce, he was careful not to exacerbate the cleavages between those who were deciding to rebuild and those who were selling their blocks, those who stayed to

fight the bushfire and those who were absent, and between those who lost their homes and those who did not:

I've always been of the view that you shouldn't make decisions emotionally and irrationally, so we'll take a little bit of time to decide what we'll do.

This is a blow there's no doubt about it and it takes a little while to recover... you go down on your hands and knees for a little while but you get back up and you keep on going. I've got friends who've been in car accidents who are in wheelchairs for the rest of their lives, we've got our health. Luckily we weren't here so we don't have any of the emotional scarring and issues that a lot of the residents who fought the fires and kept their houses still have to go through and come to terms with and thank heavens we weren't one of the very few fortunately, the very few that lost their lives - So I think we've got a lot to be very thankful for (ABC 2003a).

The ABC's Catalyst program

Six weeks after the fire, the same media organisation, ABC TV, in its program *Catalyst*, broadcast a documentary report of the reasons the bushfire penetrated so far into the suburbs. It was a long feature based on an investigation by the CSIRO, interspersed with actuality from survivors. This serves as an example of media coverage aimed at representing the disaster to the wider community and helping those affected to achieve some understanding of what had happened.

The CSIRO's investigation suggests that if most residents had followed [a named survivor's] example, a huge number of houses could have been saved. The catch is there is always a risk in staying to fight the fires (ABC 2003b).

The program advocated thorough preparation and staying to fight. While the story was well-researched and factual, it (probably inadvertently) presented one side of a potential cleavage with little balance from the other. Many people left when their situation became impossible, or because their age or infirmity limited their fire-fighting capacity, or were later prevented from entering or re-entering their suburb by the emergency

services. Those who stayed and saved their homes will regard this story as helpful but it could have hindered to some extent the recovery of those who did not.

To illustrate this point, here are some of the answers to Q104, relating to ‘offensive and unnecessarily distressing’ items in the media:

I saw [our home] burning down in a TV show and the expert saying it would not have happened if anyone had been at home with a hose. This was very distressing.

The debate that perhaps staying with your home was best in order to save it as we didn't have any [water] and it was very dangerous. This was unsettling and distressing.

Others singled the program out for praise, illustrating the nature of the cleavage:

Catalyst was the only program (and one on ACT ABC TV) which really helped in understanding what had happened, but were lazy on the ‘why’. I found that an understanding of what had happened (climate, green matter) was helpful towards recovery.

From the foregoing, it is apparent that EMA’s cleavage planes concept is useful in analysing what types of media stories helps recovery what hinders. Good journalism in this context is related to understanding the concept of cleavage planes, reporting accurately from a survivors’ point of view with a minimum of sensationalism and unfounded speculation.

Chapter Eight – Implications for policy, planning and delivery of recovery services

Introduction

The Research Team believes that the study has demonstrated that individual and community recovery after the Canberra bushfire has been the combined result of the services and support provided through formal and informal services, government and non-government organisations, and the actions that people took to help themselves and each other. Also it is clear that personal characteristics, qualities and circumstances impacted on how, and the extent to which, individuals were able to utilise the support that was available and to participate in community recovery activities.

Within this framework of factors that influenced recovery, we observed (as stated earlier in the report) that there was no single and universally shared experience or factor that helped or hindered everybody. Responses about almost every aspect of recovery were marked by their diversity across the population that we surveyed and interviewed. This has significant implications for recovery planning that we hope are reflected in the recommendations below. Commentary and recommendations are divided into the four strands originally proposed for this research project.

Whole of government, in partnership with community, approaches to recovery

The report showed that, by and large, the whole of government approach, in partnership with the community, was a very effective means by which to provide services and support to the affected community. Bushfire affected people generally appreciated:

- The quick establishment of the Task Force, and its service arm, the Recovery Centre
- The ‘one-stop shop’ model which provided access to most services under one roof and through a personal recovery worker as case manager and community worker
- The coordination of government, non-government and community services
- The ‘community feel’ of the Recovery Centre, even though people knew that it was provided by government

- The range of services and information provided, with the tangible and practical services rated highest, but all appreciated
- The welcoming nature of the Centre, the understanding of staff
- The longevity of service provision, although some thought that the Recovery Centre should have stayed open even longer

The model used after this disaster is not new. It was built on the experience of other jurisdictions, documented in the EMA Recovery Manual and taught at the EMA Training Institute. However, after this disaster the ACT was able to elaborate and develop the model, particularly as it relates to the role of the recovery worker in case management and community development and innovative counselling in the field rather than just in the office.

Respondents had suggestions as to improvements on the model. Some respondents such as rural residents and those who did not lose their home, found the model less responsive to their needs. Some would have appreciated more outreach services to their homes and rural communities. Some found it harder to access the Centre because they were working. Although it is acknowledged that the Recovery Centre worked hard to engage all groups, there is a message here that recovery managers can be even more sophisticated in targeting and refining their services.

Other services

Bushfire affected people also used a range of services outside of those delivered at or through the Recovery Centre. It was not surprising to find that many used and continue to use their General Practitioner and community health services for support, advice and treatment. This result confirms the very important role that GPs and allied health services play in community life as trusted service providers.

Some respondents did not use the formal services provided for a range of reasons, mostly because they felt that they did not need help or that there were others who were more in need. Some found it hard to ask for help, or used their family and friends as their main source of support. There was a range of suggestions as to what else could have been provided, but generally these were services that were, in fact, provided. This

indicates that the extensive communication strategies used did not reach everyone, or that if they did, people were not ready to take in the information.

Recommendations

It is recommended that governments and communities managing community recovery after disaster:

- Adopt a coordinated Task Force approach
- Ensure that the Task Force includes community representation and is advised by a community reference group and service providers
- Note that community recovery will take years and that services must be in place for extensive periods

It is recommended that Recovery managers note the effectiveness of:

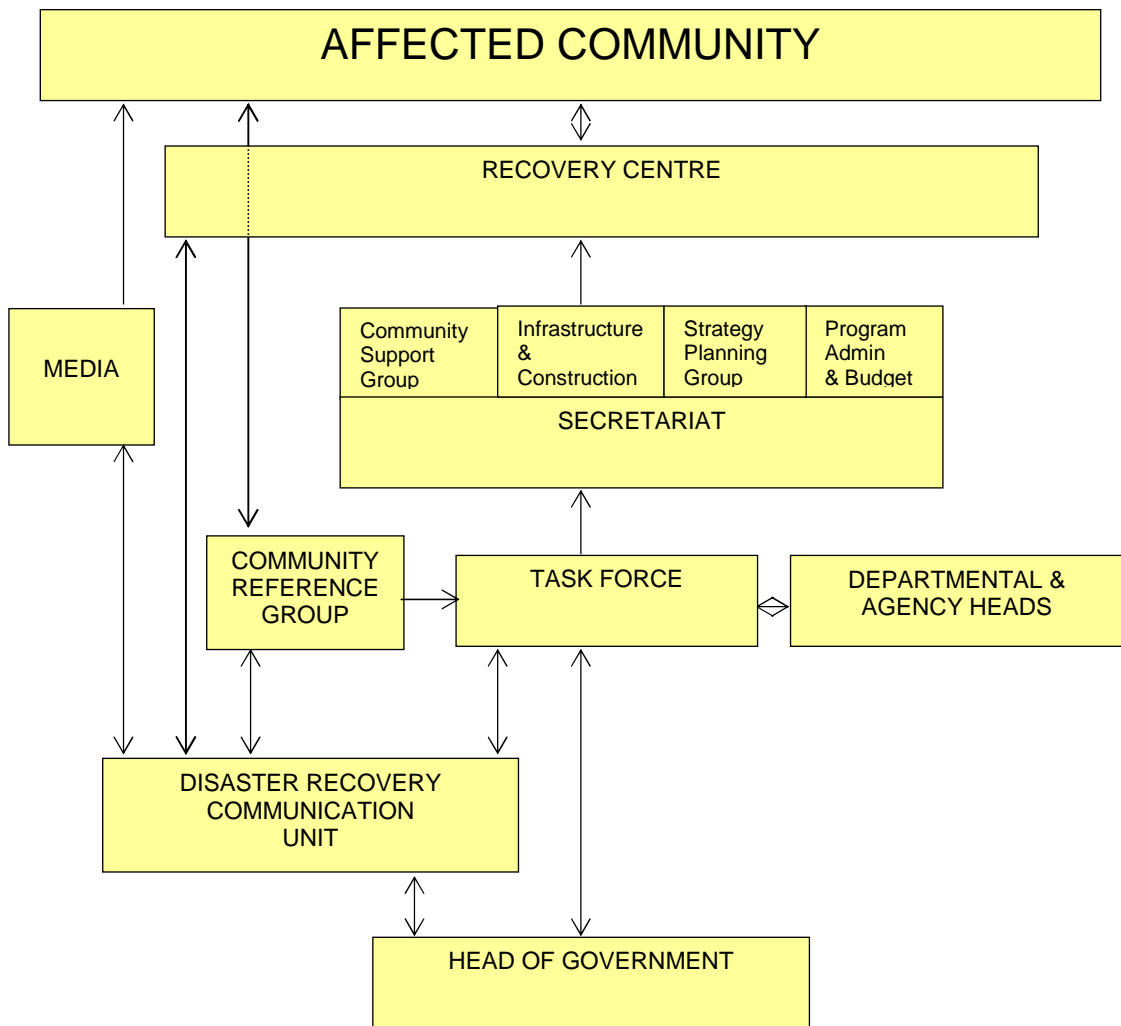
- The one stop shop, recovery centre model in the provision of services to disaster-affected people
- Recovery workers as the case managers in disaster recovery and their effectiveness in providing community support to emerging groups, streets neighbourhoods, and villages
- The need to identify groups that may feel that they are not receiving services and put strategies in place to reach them

Communication and information provision as part of the recovery process

The research team proposes a model for the management of communication in government disaster recovery planning. The affected community is at the top of the model to indicate that this is the focus of all government recovery communication efforts. The Disaster Recovery Communication Unit is close to the Head of Government to coordinate all communication efforts at the highest level and to advise on issues management and communication needs as they arise. There are direct lines of two-way contact between the Unit and the Recovery Centre, the Community Reference Group and the Task Force.

This allows maximum input to the Unit to coordinate and integrate communication, utilising inputs from these sources, recognising that two-way communication giving feedback from these levels is essential to provide information to the affected community, as it is needed. Utilising this feedback, the Unit advises both the Head of Government and the Task Force on communication needs, which are then met by communication workers in the Community Support Group in the Secretariat. There is a direct two-way contact line between the Unit and the media, to monitor and supply information as needed to mass media, and to receive feedback from journalists that may contribute to the communication effort.

Information supplied is used by mass media to inform the affected community as a third source of information along with government-originated materials (newsletters, leaflets, website, call centre, advertisements); and Recovery Centre sources including personal support and advice, and events and public meetings.



Recommendations

Recommendations for best practice recovery communication – Government communication:

- Increase range of vehicles for information delivery, and improve publicity about information sources to allow maximum access by affected community
- Develop a centralised ‘clearing house’ for all kinds of information regarding recovery and publicise it widely
- Improve liaison between government and media to increase provision of information about services and resources via media
- Inform affected community of sources of information utilising controlled word-of-mouth by utilising community organisations and strong media liaison

- Ensure as far as possible that all stakeholders' interests are catered for in information provision and communication activities
- Ensure timeliness of information by increasing lead time for events, improved distribution schedule for recovery newsletter
- Invite and publish feedback/contributions from affected community in recovery newsletter, and demonstrate receptivity to expressed needs by responding to feedback, i.e. change of content, additional content, repeat of content etc
- Minimise politicians' content in recovery newsletter
- Improve technical expertise of personnel involved in providing information and personal support
- Increase number of expert (insurance, building, finance, rental) advisers
- Improve database systems for information management
- Provide 'mobile recovery centre' visiting sites of disaster to give information and receive 'on-the-spot' feedback from community
- Inform media of psychological effects of disaster to increase media sensitivity to possibility of exacerbating disaster trauma
- Improve public information provision relating to burn offs, smoke haze and weather fire danger rating

Recommendations for best practice recovery communication – media communication:

Media management pre-disaster

- Establish contacts with key personnel (editors, chiefs of staff, executive producers) in newsrooms. This could be done in a series of outreach programs also enabling emergency managers to better understand newsroom culture.
- Educate news media managers of psychological aspects of recovery to increase media sensitivity to recovery issues and of their responsibility towards the recovering section of the audience.
- Educate news media managers on the value of reporting recovery issues in a constructive way, including the concept of potential cleavage planes.
- Educate news media managers on the effectiveness of human interest, features and documentary-style reporting, and of emphasizing consequence as a news value rather than conflict.

Media management post-disaster

- Elected representatives and local politicians should be encouraged to organise media briefings in conjunction with the disaster recovery authority.
- Media briefings should include background on recovery related issues, including the concept of potential cleavage planes, and journalists should be encouraged to acknowledge the different experiences of people after a disaster.
- Once they become aware of potential cleavage planes in the community, emergency managers should include this information in media briefings and releases.
- All information should be provided equally to all media organisations, regardless of claimed audience figures and readership, or perceived bias towards sensationalism, inaccuracy or unfounded speculation. Recovery managers should be prepared to discuss negative media coverage with journalists and news media management in an effort to avoid repetition.
- All information should be provided equally to all media, mainstream and alternative, available to the recovering community. This audience is actively monitoring a range of media, and a fairly low success rate may be sufficient.
- Recognise that a section of the community will be avoiding all media because it reminds them of the event, so alternative strategies may have to be used.
- Information and advice relating to the media's coverage of disasters and journalists' news-gathering practices should be available to survivors as soon after a disaster as possible.

Further research:

- The role of the mass media in assisting or hindering the recovery of a community after a disaster requires further research
- The extent and nature of the affect that experiencing a well-publicized disaster has on the media usage of the survivors

Medium and long-term mental health outcomes

This report shows that the negative effects of natural disasters such as bushfires can continue for a significant period and even be delayed. While project findings provide evidence of a good general recovery of most of the affected community, a considerable number of individuals report deterioration of their everyday lives and ongoing health and psychosocial problems related to the bushfire. In the presence of risk factors (such as a high degree of exposure and losses and related ongoing stressors), it appears that a relatively large proportion of bushfire-affected individuals are experiencing symptoms of post-traumatic stress and psychological distress. However, these findings are not unique to the 2003 Canberra bushfire and have been reported previously in the context of other Australian and international natural disasters.

These findings do however highlight the need to develop and implement more effective strategies to optimise outcome in terms of mental health and other impacts. It is recognised that these findings are relevant to a select population but nevertheless are consistent with findings showing ongoing effects for young adults, (Parslow et al 2005) children and adolescents (McDermott et al 2005). It must also be recognised that this study did not obtain diagnoses of clinical disorders. Though substantial, the findings cannot be found to indicate a clear development of mental illness or mental health problems, although it is probable in view of substantial data supporting these screening measures.

Recommendations focus around implications for practice and research regarding mental health aspects of disasters. It is necessary to focus beyond symptoms of post-traumatic stress, and address other mental health and disaster-related psychosocial problems.

Implications for practice

Ongoing effects of disasters

What might be appropriate programs for people who demonstrate ongoing impacts and what might they find acceptable?

Potential options to help people who are experiencing difficulties several years post-disaster:

- Promote readily accessible information, referral, and assistance for psychosocial problems and psychological distress
- Promote a range of specific mental health-trauma treatment programs available via public and/or private services
- Promote access to self-help interventions (e.g., web-based or other format) for PTSD, other mental health problems, preferably with capacity for monitoring and back-up psychological support
- Promote specialist mental health-trauma consultation for GPs/other primary-care providers regarding screening, referral and intervention options

Strategies need to be employed over the medium to long-term to support individuals who are experiencing ongoing concerns. However, it is necessary to consider what bushfire-affected individuals and communities would find helpful and access/actually use. Therapeutic initiatives need to be ‘interesting, relevant, and empowering’ (McDermott & Palmer 2001:154).

Throughout the recovery process

What would help individuals and communities affected by future disasters?

Potential options to help people in the weeks or months following disasters:

- Identify and as far as possible promote models of prevention and treatment using the most up-to-date evidence for those most at risk of ongoing mental health problems. For example, consider reviewing and adapting as necessary current Australian post-disaster interventions:
- Acute stress disorder (ASD) interventions as advocated by Professor Richard Bryant and colleagues at the University of NSW (Bryant et al 2006); and
- Proactive screening for persistent post-disaster distress of children and adolescents in schools in affected areas, use of guided therapy manuals for children (monitored by mental health professionals) and group programs for adolescents, and targeted mental health service delivery as advocated by

Professor Brett McDermott and colleagues at the University of Qld (McDermott & Palmer 2001).

- Investigate strategies to identify and monitor individuals at greatest risk of ongoing mental health and psychosocial problems and follow-up over time. For example, disaster-affected individuals with high levels of exposure and losses, previous mental health problems or trauma experiences, co-existing substance use problems, ongoing secondary stress, limited social resources, or other vulnerabilities.
- Promote a range of service options that are (a) acceptable to the affected community and easy to access, and (b) that do not focus too narrowly on PTSD, but address a range of mental health and psychosocial problems, and (c) are situated within public and/or private services.
- Reinforce collaborative relationships between specialist mental health practitioners and GPs/other primary-care providers for purposes of screening, referral, and intervention.
- Provide specialist mental health-trauma consultation for GPs/other primary-care providers (including schools, pastoral care, welfare services) regarding screening, referral and intervention options.
- Promote mental health disaster response education and training to ensure provider agencies have the necessary knowledge, skills and expertise for screening, referral and intervention.
- Promote use of self-help interventions (e.g., web-based or other format) for PTSD and other mental health problems in the post-disaster context, preferably with capacity for monitoring and back-up psychological support. For example, use of McDermott's intervention for children; assessing feasibility of internet-based interventions such as web-based screening for tailored access to mental health modules (as developed by Ruggiero and colleagues, 2006, for disaster-affected populations in the USA). Consider adapting similarly-structured Australian interventions for use in disaster contexts, for example, e-couch - Professor Helen Christensen and colleagues (Centre for Mental Health Research, ANU) and using other modes of service delivery for individuals unable to access the internet.

- Promote use of assessments and interventions that are strengths-focused and that promote hope and optimism, adaptation, and a sense of control and empowerment for resilience and recovery.

A mental health disaster support team, comprising multidisciplinary mental health professionals with specialist skills and expertise, could be responsible for assessing the feasibility and implementation of the above options. It is essential to consider strategies to ensure an integrated mental health disaster response across agencies supporting individual and community recovery to ensure a coordinated bio-psycho-social response (for example, an Interagency Disaster Mental Health Network).

It should be acknowledged that where strategies are put in place many people may choose not to access care.

Implications for research

Can additional findings be obtained from further analysis of the current data?

Further analysis of data obtained from the current project will enable researchers to further test a number of hypotheses and explore understandings and meanings of recovery experiences that are beyond the scope of this report. For example, it is possible to further investigate the correlates that indicate what added to the vulnerability of this population or factors that might have been protective for people who did not have such ongoing difficulties.

Undertaking further research will utilize the considerable information provided by disaster-affected individuals and strengthen and clarify the existing understanding of mental health in the context of medium to long-term recovery process. These data can be used to address some of the priority research areas and strategies recently identified by the National Research and Evaluation Consensus Meeting for Mental Health Aspects of Disaster and Terrorism (MH-DRC & ADF, December, 2005).

What further research and evaluation should be conducted?

In line with the recommendations of the recent Research and Evaluation Consensus Meeting for Mental Health Aspects of Disaster and Terrorism (MH-DRC & ADF, December, 2005), a pre-prepared research methodology that is ready to use at the time of disasters will facilitate research that is both timely and that addresses priority research questions. This should involve the use of research designs that encourage both monitoring of risk and testing of appropriate evidence-based interventions in specific post-disaster contexts.

Funding needs to be made available for a longitudinal follow-up and for outcome studies to evaluate interventions with a focus on specific needs of the Australian context, such as those mentioned in 'Implications for practice' above. As it is expected that parental distress is likely to predict the distress of their children, it is important to examine children/young people and their parents together within the same studies.

Recommendations

- That service providers assist individuals who require support for a range of ongoing disaster-related mental health and psychosocial problems.
- That service providers investigate and implement effective strategies to optimise outcome in terms of mental health and psychosocial problems in the medium and long-term post-disaster.
- That service providers investigate ways to assist individuals at various life stages to minimise a range of disaster-related mental health and psychosocial problems that may occur in the years post-disaster.
- That funding bodies support comprehensive analysis of data provided by disaster-affected individuals in order to strengthen and clarify the existing understanding of mental health in the context of medium to long-term recovery processes.

- That funding bodies support Australian-based longitudinal follow-up and outcomes studies to evaluate interventions, and research that focuses on children/young people and their parents together within the same studies.

Community and individual resilience

This study confirms other research findings that communities themselves are central to the recovery process and that recovery is best achieved “when the affected community is able to exercise a high degree of self-determination”. (EMA 2004:3). An analysis of the main themes drawn from the study provides a number of messages for policy makers and practitioners as they consider how best to enable community and individual resilience after disasters, especially in the medium and longer term.

Using Woolcock and Narayan’s theoretical framework for understanding social capital (in Healy et al, 2003), the study confirms the importance of the support of family and friends; of helping people link with local communities and communities of ‘interest’ (that is, with people who may not live close but with whom other interests such as church or sport are shared); and of empowering people through strengthened links to government and community decision making.

Governments will be interested in how they can not only encourage and enable stronger connections at all of these levels but also, in how they can avoid actions which unintentionally interfere with or weaken these potentially positive networks.

Bonds with family and friends

The importance of family and friends and their understanding of the impacts of disasters is a clear theme in this report. While most received support from both, there was also an element of disappointment expressed about those who clearly did not appreciate the medium and longer term impacts of trauma and loss. Community education is needed to help family and friends in these circumstances know how to respond, including realising the unintended negative impacts of some of their well meaning actions.

Connecting with local communities and other ‘communities of interest’

The study revealed many examples of government and community groups working together to facilitate increased opportunities for contact. This includes contact with people who may not have previously known each other, but who gained support and resources from sharing their experiences and their different networks. Chapter 6 of the report, for example, details imaginative and creative events such as the AIS fun day, the lake cruise for over 70s, Duffy School get-togethers, and street afternoon teas at the Recovery Centre and quilting groups (to mention but a few). These events gave people opportunities to reflect together and in some instances to form lasting bonds which helped their recovery. There is a need, from the immediate days following disasters to structure opportunities for such contact and to actively outreach to vulnerable groups so that they can also take advantage of these opportunities.

The report also highlights the importance of the ‘kindness of strangers’. Participants told of how uplifted they were by these acts which they believed moved beyond the value of practical support. Those individuals and community groups for example, who travelled around the damaged suburbs in the early days after the fire, distributing food and cold drinks to people affected, contributed to ‘recovery’ by letting affected people know that others understood and cared about what had happened to them.

Linking with government and other powerful institutions

Of particular significance in Woolcott and Narayan’s theory of social capital are the ‘linking’ networks that develop between individuals and groups and powerful institutions such as government and business. Residents’ associations such as those that developed on the Mt Taylor Estate, Chapman, Stromlo, Pierce’s Creek, Uriarra and the Phoenix Association played an important role for many in contributing to a sense of empowerment and self determination among residents.

There are many examples of how such groups, which developed only after the fire, formed successful partnerships with government to organise social, commemorative, and information events for bushfire affected people and the wider community. At these events, government officials mingled with community members so that they could be close to ‘communities’ and better monitor their needs. Similarly the Community and

Expert Reference Group not only played a valuable advisory role with the Task Force, it enabled community representatives and those whom they represented to reclaim a sense of the control that had been lost in the cataclysmic events of January 18. There are difficult messages for governments in this; encouraging and empowering the social activism of these groups is important for the greater good but often means sustained and highly vocal criticism of government's role in both disaster response and recovery. There is also a clear message in the research about the potentially damaging impacts on some people's recovery of delays, or perceived delays, in the conduct of coronial and other inquiries.

The critical role of mutual and self help, including volunteering

As studies on community recovery have consistently found, locally driven, bottom up approaches to recovery are the most effective (Pettersen, 1999:13). This research demonstrates the many ways in which people helped themselves and each other after the disaster. It clearly demonstrates the positive place of volunteering and of the considerable resources available through church and other groups such as sporting clubs. To facilitate community resilience, these forms of mutual and self help need to be encouraged and enabled by governments. In this research there were many examples of this happening.

There was also some criticism that reservoirs of skills, expertise and energy were not sufficiently tapped into by some institutions. Whereas human services agencies, for example, those which staffed the Bushfire Recovery Centre, clearly had sophisticated understandings of the importance of volunteers, other institutions were regarded as less well prepared and committed to invest time in volunteers. Criticism was levelled, for example, at a number of government environmental and arts institutions for not being prepared for the roles they could play in a major natural disaster of this kind. There was a perception that some institutions regarded offers of help as obstructive; that others slavishly adhered to policies and procedures which did not allow for creative ways of working in the face of large scale emergencies.

Volunteering appears to be important on many levels, not just for the additional resources it provides the community. Volunteering can give people an opportunity to connect with others and to reinforce their sense of belonging and self-worth following a

traumatic event. It can help transform 'victimhood' into empowerment, thereby creating a positive basis for long term recovery. This was particularly the case in the Canberra community where so many people had not previously required the assistance of formal services.

Work and its place in recovery

Work is identified as a strong factor in both supporting and diminishing recovery. Participants on the one hand commented on the supportive nature of workplaces which were sympathetic and accommodating of leave and work performance. Others commented on some isolated examples of workplaces having quite unrealistic expectations of people returning to work after the fire leading to significant stress. As with schools, it appears workplaces varied in the extent to which they recognised the medium and longer term impacts of trauma and loss.

Personal strategies in building resilience

Participants in this research were highly articulate about what they perceived to be key strategies in recovery and in building resilience. The report groups these under four headings:

- Returning to a sense of normality
- Dealing with difficult emotions
- Focusing on values and redefining what's important
- Engaging in meaningful activities

There is considerable potential for the information provided under these broad themes to be more widely disseminated as helpful information for future disaster affected communities.

Factors relating to the physical environment

Changes in the physical environment were an ongoing reminder for many of trauma and loss and were identified as a factor delaying recovery. There is a clear message to policy makers and practitioners about recognition of loss beyond personal assets and belongings. Opportunities to grieve about the loss of the environment which clearly

means so much to the people of Canberra as it would in many parts of Australia should be a part of any recovery process. Along with recognition of loss, should be information about how the environment will recover and indeed helping people 'look down in the undergrowth' and to celebrate rejuvenation and hope

Recommendations

The research team recommends:

- That information about how recovery, including medium and long term recovery, takes place be made available to individuals and families to help them understand their own responses and/or those of others in the family
- That consideration be given to incorporating the detailed information about resilience strategies provided by participants in this research into a set of information guides for people affected by disasters
- That the community generally be provided with information about the nature of recovery to facilitate greater understanding and tolerance of the feelings and experiences of disaster victims, in particular that individuals experience recovery at their own pace and in their own way
- That governments note that street barbeques and parties were very popular events for people affected by the bushfire and that there is value in actively structuring local opportunities to bring people together for contact and support immediately after disasters and at particular points afterwards
- That governments note there is a need to support where possible the ongoing development of groups which form as a result of this contact
- That governments make arrangements for prioritising and outreaching to vulnerable groups after a disaster, noting that in the case of this bushfire these groups included: those who are bereaved or have suffered serious injury; those who were separated and traumatised through evacuation procedures; those who had feared they would die or that they would lose loved ones; those who had suffered previous trauma and/or disadvantage
- That support be provided for the development of self-help and mutual help groups, with a particular focus on volunteerism following a natural disaster,

to harness the energy and creativity and increased sense of control that seems to result from this kind of involvement

- That governments ensure transparent and expeditious handling of any investigation of their roles and responsibilities related to a disaster and its aftermath
- That resident and other activist groups be recognised and supported and that government officials take every opportunity to stay closely involved with community groups generally to monitor and to better respond to their needs and concerns
- That all disaster recovery plans should articulate strategies for engaging government and community institutions beyond traditional welfare sector institutions, especially those concerned with the arts and the environment
- That governments note the positive effects of commemorative events such as memorial services and anniversaries to mark losses; it should note that losses are not confined to loved ones, loved animals and personal assets; lost environments should also be commemorated and conscious attempts should be made to help people look forward with hope to rejuvenation and the part that can be played by all in assisting this
- That governments note that research which engages communities in thinking and reflecting on their experiences after a disaster can itself be therapeutic and should be undertaken at key points in recovery – the short, medium and long term.

Bibliography

- ABC (2003a) "Robert de Castella talks about the loss of his Chapman home in the Canberra bush fires". *Stateline*. Australian Broadcasting Corporation. Retrieved 6th August 2006 from http://www.abc.net.au/stateline/act/transcript_archive2003.htm>
- ABC (2003b) "Canberra Firestorm 27 February 2003". *Catalyst*. Australian Broadcasting Corporation. Retrieved 6th August 2006 from <http://www.abc.net.au/catalyst/stories/s794270.htm>>
- ABS (2001) National Regional Profile.
<<http://www.ausstats.abs.gov.au/ausstats/free.nsf/>>
- ABS (2003) *General Social Survey: Summary of Results Australia 2002*. Canberra, Australia: Australian Bureau of Statistics
- ABS (2006) *2004–2005 National Health Survey: Summary of Results*. Cat. No. 4364.0. Canberra, Australia: Australian Bureau of Statistics
- ACPMH (NDa) 'Assessment and diagnosis'. Melbourne, Australia: The Australian Centre for Post-traumatic Mental Health.
<http://www.acpmh.unimelb.edu.au/mentalhealth/assessmentAndDiagnosis.html>>
- ACPMH (NDb) 'PTSD Review'. Melbourne, Australia: The Australian Centre for Post-traumatic Mental Health.
<<http://www.acpmh.unimelb.edu.au/research/ptsdReview.html>>
- ACT Health (2006) *ACT Chief Health Officer's Report*. Canberra, Australia: ACT Government
- ACTPLA (2006) ACT Planning and Land Authority
- ACT (2003) *The Report of the Bushfire Recovery Taskforce: Australian Capital Territory October 2003*
- ACT (2003) *Report of the Inquiry into the Operational Responses to the January 2003 Bushfires in the ACT*
- AIHW (2004) *Australia's Health 2004*. AIHW Cat. No. AUS 44. Canberra, Australia: Australian Institute of Health and Welfare
- Australian Government House of Representatives Select Committee (2003) *A Nation Charred: Report on the inquiry bushfires* House of Representatives Select Committee on the recent Australian Bushfires, Parliament of Australia
- Australian Government Department of Transport and Regional Services (2004) *Natural Disasters in Australia: Reforming Mitigation, Relief and Recovery Arrangements* Commonwealth of Australia, Canberra
- Betts, R (2004) *Victoria's Drought Social Recovery Program: Commencing and Evaluation Process* Office of the Emergency Services Commissioner, State Government Victoria Melbourne

- Bolin, R and Stanford, L (1998) *Disasters* 22: 21-38
- Bonanno, G. A. (2004) 'Loss, trauma, and human resilience'. *American Psychologist* 59, (1) 20–28
- Bonanno, G. A. (2005a) 'Clarifying and extending the construct of adult resilience'. *American Psychologist* 60, (3) 265–267
- Bonanno, G. A. (2005b) 'Resilience in the face of potential trauma'. *Current Directions in Psychological Science* 14, (3) 135–138
- Bonanno, G. A., Rennicke, C., & Dekel, S. (2005) 'Self-enhancement among high-exposure survivors of the September 11th terrorist attack: Resilience or social maladjustment'. *Journal of Personality and Social Psychology* 88, (6) 984–998
- Bonanno, G. A., Wortman, C. B., Lehman, D. R., Twed, R. G., Haring, M., Sonnega, J., et al. (2002) 'Resilience to loss and chronic grief: A prospective study from pre-loss to 18-months post-loss'. *Journal of Personality and Social Psychology* 83, (5) 1150–1164
- Britton, N (1991) *Social Crisis Contingencies at Local and State Government Levels: Recent Australian Developments* Centre for Disaster Management, Armidale
- Bryant, R., Moulds, M., Nixon R. D. V., Mastrodomenico J., Felmingham K.L. & S. H. (2006) 'Hypnotherapy and cognitive behaviour therapy of acute stress disorder: A three-year follow up'. *Behaviour Research and Therapy* 44, 1331–1335
- Carr, V. J., Lewin, T. J., Kenardy, J. A., Webster, R. A., Hazell, P. L., Carter, G. L. et al (1997a) 'Psychosocial sequelae of the 1989 Newcastle earthquake: III. Role of vulnerability factors in post-disaster morbidity'. *Psychological Medicine* 27, (1) 179–190
- Carr, V. J., Lewin, T. J., Webster, R. A., & Kenardy, J. A. (1997b) 'A synthesis of the findings from the Quake Impact Study: A two-year investigation of the psychosocial sequelae of the 1989 Newcastle earthquake'. *Sociology Psychiatry Psychiatric Epidemiology* 32, (3) 123–136
- CER (2002) *NSW Child Health Survey 2001*. 13th Supplement, S-3, Centre for Epidemiology Research, 1–84
- Coghlan, B.J (2004) The human health impact of the 2001-2002 'Black Christmas' bushfires in New South Wales, Australia: An alternative multidisciplinary strategy. *Journal of Rural and Remote Environmental Health* 3, (1) 18-28.
- Coles, E and Buckle, P (2004) 'Developing community resilience as a foundation for effective disaster recovery' *The Australian Journal of Recovery Management* 19, 4: 6-15
- Conley, D and S Lamble (2006) *The daily miracle: An introduction to journalism*. 3rd ed. South Melbourne Vic: Oxford University Press

- Connor, K. M., Foa, E. B., & Davidson, J. R. (2006) 'Practical assessment and evaluation of mental health problems following a mass disaster'. *Journal of Clinical Psychiatry* 67, Supplement 2, 26–33
- Creamer, M., Burgess, P., & McFarlane, A. C. (2001) 'Post-traumatic stress disorder: findings from the Australian National Survey of Mental Health and Well-being'. *Psychological Medicine* 31, (7) 1237–1247
- Davidson, L., O'Connell, M. J., Tondora, J., Lawless, M., & Evans, A. C. (2005) 'Recovery in Serious Mental Illness: A New Wine or Just a New Bottle?'. *Professional Psychology: Research and Practice* 36, (5) 480–487
- Denemark, D., (2005) 'Mass media and media power in Australia'. Wilson et al, *Australian social attitudes: the first report*. Sydney NSW: UNSW Press
- Doherty, M., (2003) 'Builder praised for landmark construction'. *Canberra Times*. Monday, 30th June
- Dwyer, A (2005) in *Natural Hazard Risk in Perth, Western Australia* (Eds) Jones, T, Middlemann, M and Corby, N Geoscience Australia, Canberra
- EMA (2004) *Manual 10: Recovery*. Canberra, Australia: Emergency Management Australia
- Ellis, S, Kanowski, P and Whelan, R (2004) *National Inquiry on Bushfire Mitigation and Management* Commonwealth of Australia, Canberra
- Eyre, A (2004) *The Australian Journal of Emergency Management* 19, 4: 23-27
- Gordon, R (2003) *Safer Sustainable Communities*, Australian Disaster Conference Emergency Management Australia, Canberra
- Gordon, R. (2004) The social dimension of emergency recovery. IN *EMA Manual 10: Recovery* (pp.111-144). Canberra, Australia: Emergency Management Australia.
- Halvorson, S (2002) *Natural Hazards Research and Applications Information Centre Quick Response Report 151*, <http://www.colorado.edu/hazards/qr/qr151.html>
- Healy, K., Hampshire, A. & Ayres, L. (2003) In *Integrated Learning Network Consultative Policy Development Conference*, Canberra
- Ife, J. (1995) *Community Development* Allen & Unwin
- Johnson, D, Headey, B and Jensen, B (2005) *Communities, social capital and public policy: Literature review* Policy Research paper Number 25, Australian Government Department of Family and Community Services, Canberra
- Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E, Mroczek, D. K., Normand, S. L. T., et al (2002) 'Short screening scales to monitor population prevalences and trends in non-specific psychological distress'. *Psychological Medicine* 32, 959–976
- King, D. (2002) 'Post disaster surveys: Experience and methodology'. *Australian Journal of Emergency Management* 17, (3) 1–13

- Lewin, T. J., Carr, V. J., & Webster, R. A. (1998) 'Recovery from post-earthquake psychological morbidity: Who suffers and who recovers?' *Australian and New Zealand Journal of Psychiatry* 32, 15–20
- Linley, P. A., & Joseph, S. (2004) 'Positive change following trauma and adversity: A review'. *Journal of Traumatic Stress* 17, (1) 11–21
- Lowe, S and Fothergil, A (2004) *A need to help: Emergent Volunteer Behavior after September 11, Beyond September 11: An Account of Post-Disaster Research* Public Entity Risk Institute of Fairfax, Virginia; the Institute of Civil Infrastructure Systems, New York
- McDermott, B.M.C. Emotional distress and depression in children and adolescents following Australian bushfire disasters. Unpublished doctoral dissertation, University of Tasmania, Australia.
- McDermott, B. M., & Palmer, L. J. (2001) 'Wilderness area and wildfire disasters: Assessment and treatment insights from a child and adolescent screening program'. A. LaGreca, W. K. Silverman, E. M. Vernberg & M. C. Roberts (Eds.) *Helping Children Cope with Disasters: Integrating Research and Practice*. Washington, DC: American Psychological Association (pp. 139–156)
- McDermott, B. M., & Palmer, L. J. (2002) 'Post-disaster emotional distress, depression and event-related variables: Findings across child and adolescent developmental stages'. *Australian and New Zealand Journal of Psychiatry* 36, 754–761
- McDermott, B. M., Lee, E. M., Judd, M., & Gibbon, P. (2005) 'Post-traumatic stress disorder in children and adolescents following a wildfire disaster'. *Canadian Journal of Psychiatry* 50, (3) 137–143
- McFarlane, A. C. (1987) 'Post-traumatic phenomena in a longitudinal study of children following a natural disaster'. *Journal of the American Academy of Child and Adolescent Psychiatry* 26, (5) 764–769
- McFarlane, A. C. & Papay, P. (1992) 'Multiple diagnoses in post-traumatic stress disorder in the victims of a natural disaster'. *Journal of Nervous and Mental Disability* 180, (8) 498–504
- McFarlane, A. C., Clayer, J. R., & Bookless, C. L. (1997) 'Psychiatric morbidity following a natural disaster: an Australian bushfire'. *Social Psychiatry and Psychiatric Epidemiology* 32, 261–286
- McFarlane, A. C. & Raphael, B. (1984) Ash Wednesday: the effects of a fire. *Australian and New Zealand Journal of Psychiatry* 18, 341-351.
- Mannock, I (2001) *Disaster Recovery: A Community Approach* School of Public Health, Charles Sturt University, Bathurst
- MH-DRC & ADF (National Mental Health Disaster Response Committee & Australian Department of Defence) (December, 2005) *Research and Evaluation Consensus Meeting for Mental Health Aspects of Disaster and Terrorism*. In University of Western Sydney & NSW Health Population Mental Health & Disasters Project

- Activities Report 2005/2006 (pp. 44-64). NSW Health Department, Sydney, Australia.
- Norris, F. H. (2005) 'Range, magnitude, and duration of the effects of disasters on mental health: Review Update 2005'. *Research Education Disaster Mental Health*, Dartmouth:UK NCPTSD.
<<http://www.redmh.org/research/general/effects.html>>
- Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K. (2002a) '60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981–2001'. *Psychiatry* 65, 207–239
- Norris, F. H., Friedman, M. J., & Watson, P. J. (2002b) '60,000 disaster victims speak: Part II. An empirical review of the empirical literature, 1981–2001'. *Psychiatry* 65, 240–260
- Norris, F. H., & Kaniasty, K. (1992) 'Reliability of delayed self-reports in disaster research'. *Journal of Traumatic Stress* 5, (4) 575–588
- Norris, F. H., & Kaniasty, K. (1996) 'Received and perceived social support in times of stress: a test of the social support deterioration deterrence model'. *Journal of Personal and Social Psychology* 71, (3) 498–511
- NSW IPCMH (2000) *Disaster Mental Health Response Handbook*. Sydney, Australia: NSW Institute of Psychiatry and Centre for Mental Health
- Parslow, R. A., Jorm, A. F., & Christensen, H. (2005) 'Associations of pre-trauma attributes and trauma exposure with screening positive for PTSD: Analysis of a community-based study of 2085 young adults'. *Psychological Medicine* 36, 1–9
- Pettersen, J (1999) *A Review of the Literature and Programs on Local Recovery from Disaster* Natural Hazards Research and Applications Information Centre, Institute of Behavioural Sciences, University of Colorado, Boulder.
- Pirkis, J., Burgess, P., Kirk, P., Dodson, S., & Coombs, T. (2005) *Review of standardised measures used in the National Outcomes and Case-mix Collection*. (Version 1.1) Canberra, Australia: Australian Mental Health Outcomes and Classification Network
- Prins, A., Ouimette, P., Kimerling, R., Cameron, R. P., Hugelshofer, D. S., Shaw-Hegwer, J., et al. (2003) 'The primary care PTSD screen (PC-PTSD): Development and operating characteristics'. *Primary Care Psychiatry* 9, (1) 9–14
- Pynoos, R. S., Steinberg, A. M., & Wraith, R. (1995) 'A Developmental model of childhood traumatic stress'. D. Cicchetti & D. J. Cohen (Eds.) *Developmental Psychopathology*. New York: Wiley.
- Ruggiero, K. J., Resnick, H. S., Acierno, R., Coffey, S. F., Carpenter, M. J., Ruscio, A. M., et al. (2006) 'Internet-based intervention for mental health and substance use problems in disaster-affected populations: a pilot feasibility study'. *Behavioural Therapy* 37, (2) 190–205

- Sanderson, K., & Andrews, G. (2002) 'The SF-12 in the Australian population: cross-validation of item selection'. *Australian and New Zealand Journal of Public Health* 26, (4) 343–345
- Sullivan, M (2003) 'Integrated recovery management: A new way of looking at a delicate process' *The Australian Journal of Emergency Management* 18, 2: 4-22
- Victoria State Emergency Response Unit (2000) *Recovery from Emergencies* Melbourne
- Ware, J., Jr., Kosinski, M., & Keller, S. D. (1996) 'A 12-item short-form health survey: Construction of scales and preliminary tests of reliability and validity'. *Medical Care* 34, (3) 220–233

-