

Mental Health, Exposure Severity and Resilience-Building After the 2019-2020 Black Summer Bushfires

AUTHORS

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INTRODUCTION AND AIMS

The 2019-2020 Black Summer Bushfires affected nearly every Australian state and territory, with 33 fatalities, 17 Million ha of land burned, and 3,094 houses lost (DPS, 2020).

Health and wellbeing impacts of bushfire vary widely, with some people demonstrating relative resilience, recovery, and even growth (Gallagher et al., 2019). Others experience significant health and wellbeing impacts that extend for long periods beyond the fires (Bryant et al., 2014).

We aimed to identify the mental health and wellbeing of Australians following Black Summer. We also aimed to identify Australian-specific factors that promote coping and resilience after fires.

METHODS

An online, nation-wide survey (n=3,083) was conducted, measuring mental health and wellbeing, resilience, and coping behaviours among Australian adults in bushfire-affected and non-affected areas. Participants completed standardised mental health measures and questions about factors relating to health and wellbeing and their experience with bushfire.

Participants were recruited from general community samples online (n=903) and via postal invitation (n=106, RR=1.2%), as well as a paid sample (n=2,659) and university student credit pools (ANU n=54 and UWA n=218). Data was screened based on age (≥18), residence in Australia since October 2019, command of English, minimum survey completion, and overall survey completion time, yielding n=3,083 participants.



PRELIMINARY FINDINGS

Bushfire-Affected Postcodes

Participants in bushfire-affected areas (n=566) (defined by the ATO) showed high levels of emotional distress a year after the fires, with higher probable depression and anxiety than the general population. Further, at least 20% of participants met the cut-off for probable PTSD. Females showed elevated stress. Wellbeing rates were lower than ideal, around 50-60%. Average or medium levels of resilient-coping were evident.

Developing a Bushfire Exposure Severity Scale

Severity of disaster exposure is related to mental health outcomes (Chan & Rhodes, 2014). Previous research with Australian bushfire survivors has classified bushfire severity based on fatalities and property loss (Bryant et al., 2014).

Given the expanse, duration and intensity of the 2019-2020 bushfires, we developed a scale of bushfire exposure experiences to count and categorise (High, n=424, Medium (Fire Experience), n=213, Medium (Income Loss), n=756, or Low, n=902) the severity of bushfire exposure across participants.

| Exposure Category | High | Medium (Fire experience) | Medium (Indirect) | Low |
|-------------------|--|---|---|--|
| Exposure Category | <ul style="list-style-type: none"> Loss of home Death of loved one Currently displaced Severely injured Felt life was in danger | <ul style="list-style-type: none"> Evacuated Loss of property, pets, or animals Moved home Injury to others | <ul style="list-style-type: none"> Loss of income due to fires | <ul style="list-style-type: none"> Emergency alert level Loss of community buildings Involved in service provision, fire fighting, or fire response |
| N | 424 | 213 | 756 | 902 |

| Variable (Source) (n=566) | Male N = 179 M scale scores | Female N = 387 M scale scores | Sample scores relative to population rates |
|---------------------------|-----------------------------|-------------------------------|--|
| Depression (PHQ9) | 7.8 | 8.5 | Higher |
| Anxiety (GAD7) | 6.3 | 7.5 | Higher |
| PTSD (PTSDI) | 14.3 | 15.4 | Higher |
| Stress (PSS4) | 6.0 | 6.6 | Higher |
| Wellbeing (WHOS) | 60.5 | 51.7 | Lower |
| Resilience Coping (BRCS4) | 15.3 | 14.5 | Average |
| PTG (PTGI) | 18.4 | 19.4 | Lower |

DISCUSSION AND CONCLUSION

Preliminary results support previous findings that severe bushfires affect health and wellbeing. With climate and weather extremes more likely to increase in severity and frequency (IPCC, 2021), an understanding of how to promote resilience against disaster is critical.

Our next step is to identify factors in our survey that predicted mental health and resilience after Black Summer, including the role of severity of exposure. We will also conduct qualitative interviews with bushfire affected Australians in the future to further explore factors likely to promote resilience.