

Research Summary

Adult psychological outcomes following the Hazelwood mine fire: A mixed methods study

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Analysis aims

This study assessed the psychological impacts of six weeks of exposure to smoke and ash from the Hazelwood mine fire. The study compared residents from the most exposed community (Morwell) with those from a similar, but minimally-exposed, control community (Sale).

Meet the team

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Background

The fire in the Morwell open cut brown coal mine adjacent to the Hazelwood Power Station blanketed the town of Morwell and the surrounding area in smoke and ash for six weeks in February and March 2014. The smoke event was recognised as one of the most significant air quality incidents in Victoria's history, with the concentration of smoke contaminants reaching high levels.

The smoke event caused considerable community concern within Morwell and the broader community. In response to these concerns, and following extensive community consultation, the Hazelwood Health Study (HHS) was established to examine the impacts of the mine fire. The HHS involves multiple research streams targeting different health outcomes and different vulnerable groups.



What we did

This analysis combined two different sets of findings. Firstly, outcomes from the Adult Survey of 3091 participants in Morwell and 960 in Sale completed more than two years after the event. Secondly, information from face-to-face interviews with 26 of the Morwell Adult Survey participants. The survey included a measure of posttraumatic stress symptoms associated with the mine fire, a measure of general distress and information on mental health diagnoses. The interviews explored the psychological impacts more deeply, particularly the posttraumatic stress symptoms.



What we found

In a self-report survey, Morwell residents scored higher than Sale residents on a measure of symptoms of posttraumatic stress associated with the mine fire event. Morwell residents also scored higher on a measure of general distress. Results indicated that, on average, the Hazelwood mine fire continued to generate moderate levels of distress in the local community more than two years after the event. However, there was considerable diversity in the response, from no impact to severe distress. These findings were supported by qualitative interviews. Half of the interview participants reported no psychological impact at the time of the mine fire event, nine reported impacts at the time which had dissipated by the time of the interviews, and the remaining four reported still being psychologically impacted three years post-event. Intrusive thoughts were the most frequently reported symptom of posttraumatic stress. The interviews highlighted the increased vulnerability of people with pre-existing mental health concerns. It appears that diagnosis of PTSD has been more common in Morwell since the mine fire; however, total numbers are too small to be certain.

To request a copy of the full report, please call 1800 985 899 or email contact@hazelwoodhealthstudy.org.au



Considerations

While all attempts were made to ensure that the Adult Survey participants were representative of their communities, participants tended to be older and more advantaged than non-participants. In addition, the self-report nature of the survey may have reduced the reliability of the responses. Finally, the small sample used for the interviews may have restricted the range of possible responses. Therefore, the results may not necessarily reflect the experiences of all adults following the 2014 Hazelwood mine fire.



Where to from here

This research comprises one aspect of the HHS Psychological Impacts stream. Future activities for this stream include follow up surveys and interviews with adults and with school-aged children, and targeted analysis of the existing data to look at specific factors such as age, prior mental health history, and prior exposure to traumatic events.

The Hazelwood Health Study is a collaborative program of research led by the Monash University Schools of Public Health and Preventative Medicine and Rural Health in partnership with Federation University, the Menzies Institute for Medical Research at the University of Tasmania, the University of Adelaide and the CSIRO.

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