

# Bushfire and adolescent mental health: A systematic review

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## Abstract

**Objective:** In the context of escalating impacts of climate change, bushfires have emerged as a natural disaster that may significantly impact a population's mental health. Adolescents typically residing in rural and regional areas present unique challenges in the aftermath of bushfires.

**Method:** Adhering to the PRISMA framework, a literature search was conducted to identify studies assessing the impact of bushfires on mental health in adolescent populations. Extracted information included demographic characteristics, bushfire location, timeframe post-bushfire, study design and relevant mental wellbeing outcomes.

**Results:** Nineteen studies were included within the review, which examined the impact of nine separate bushfire events across six countries. There are consistent findings suggesting that exposure to bushfire is associated with adolescent mental disorders, particularly post-traumatic stress disorder and depressive symptoms. Consistent predictors of poor mental health findings in adolescents include the subjective feeling of threat during the bushfire, property loss, housing adversity and injury to oneself or a family member. There is also replicated evidence that in adolescent populations, subjective or perceived life threat has a greater impact on post-traumatic stress disorder symptoms than objective or actual life threat.

**Conclusion:** All studies showed that exposure to bushfires impacts adolescent mental health, with some symptoms worsening at follow-up. Adolescents require sustained psychosocial supports and targeted interventions within impacted regional and rural communities. Future research should further explore long-term impacts and strategies to effectively manage the impact of bushfire.

## Keywords

Bushfire, wildfire, mental health, adolescence, trauma, depression

## Introduction

In recent years, bushfires have emerged as one of the most devastating modern natural disasters. Bushfires are defined as any uncontrolled burning of vegetation that spreads through a natural environment, such as in a forest or grassland (Tedim et al., 2020). Bushfires have the potential to destroy vast ecosystems and infrastructure. Driven by climate change, their frequency and intensity are projected to escalate further (Brown et al., 2021b; Herold et al., 2021), with recent studies estimating that currently there are 3 million more hectares of environment damaged by bushfires each year when compared with 20 years ago (Tyukavina et al., 2022). This escalation of bushfire events heightens the proportion of individuals at risk of exposure to bushfire

and the likelihood of the subsequent mental health effects that can occur post-event (Cook et al., 2008).

A recent scoping review of 60 studies highlighted the impact of exposure to bushfire events on the mental health of the adult population (To et al., 2021). The results revealed

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