

Children's Knowledge of Bushfire Risk

Briony Towers¹, John Handmer², Katharine Haynes³, Douglas Paton¹, & Josh Whittaker²

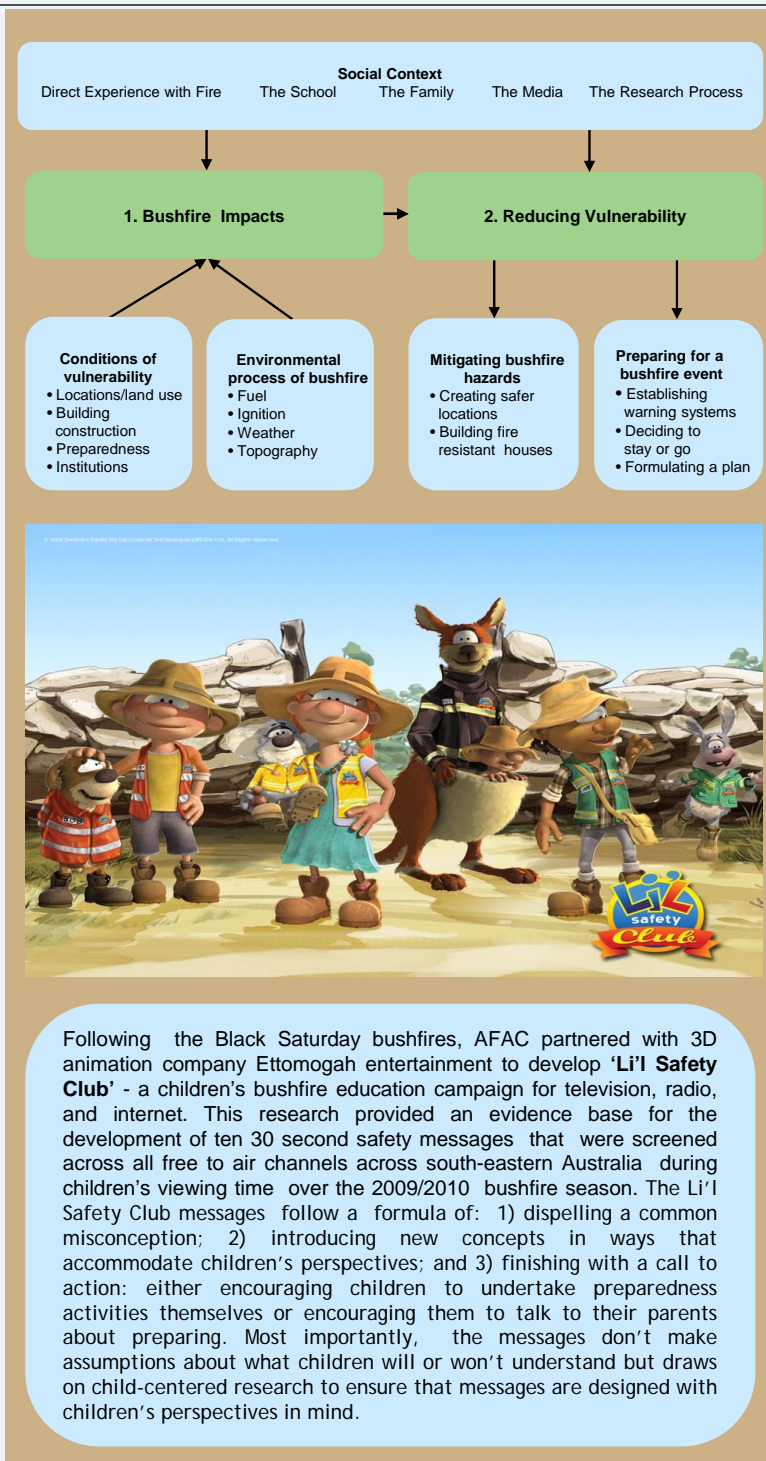
¹School of Psychology, University of Tasmania, ²School of Mathematical and Geospatial Sciences, ³Risk Frontiers, Macquarie University

The need for children's bushfire education

The unique climate and ecology of south-eastern Australia makes it highly prone to bushfire activity and, as human settlements continue to encroach on native landscapes, bushfire hazards are rapidly increasing. As a result, Australian governments and emergency management agencies have identified building community capacities for reducing bushfire hazards as a key priority. Whilst insufficient on its own, public education is critical to building these capacities and, although the value of educating children has been overlooked in the past, the 2009 Victorian Bushfires Royal Commission has identified it as a key strategy for enhancing community resilience. In its final report, the Commission explicitly recommended that "the national curriculum incorporates the history of bushfire in Australia and that existing curriculum areas such as geography, science and environmental studies include elements of bushfire education".

Understanding children's perspectives

As several decades of research on public education for natural hazards has clearly demonstrated, positive results cannot be expected unless programmes understand and accommodate the existing knowledge and perspectives of the community. An extensive literature in psychology and education argues that this is especially important when it comes to educating children. Yet, to a very large extent, children have been excluded from the discourses of disaster research and, as a result, very little is known about how they conceptualise concepts such as 'hazard', 'disaster', or 'risk'. Even less is known about how they understand these concepts in the context of bushfire. Thus, in order to develop bushfire education programmes that accommodate the knowledge and perspectives of children, children must be given the opportunity to articulate their views. This was the aim of the current study.



What do children know?

Based on qualitative focus group interviews with 240 primary school students across south-eastern Australia, a model representing children's knowledge of bushfire risk was developed. This model, at the left, is comprised of two-parts. The first part is **bushfire impacts** which were conceived as an interaction between the **environmental process of bushfire** and **conditions of vulnerability**. The second part is **reducing vulnerability** which was conceived as a two-phase process involving **mitigating bushfire hazards** and **preparing for a bushfire event**. The depth, breadth, and accuracy of children's knowledge in these various domains was highly variable: some children demonstrated a highly sophisticated understanding that included concepts such as firebrands, radiant heat and how to protect one's self from these hazards. Other children had a more simplistic understanding consisting largely of misconceptions such as the notion that it is safe to shelter from a bushfire in a bath or a swimming pool.

How do they know it?

Importantly, much of the variation in children's knowledge could be accounted for by the social contexts of their everyday lives. When children had been afforded the opportunity to participate in bushfire risk reduction activities or discussions, they exhibited a much more sophisticated understanding than children who had been denied such opportunities. Importantly, when children did not have access to information, they constructed their own mental models based on their pre-existing knowledge. For example, in Australian schools, a major emphasis is placed on house fire safety and, when children did not have information about bushfire hazards, they routinely applied their knowledge of house fire to the bushfire context. Thus, children's knowledge of bushfire risk is a function of two processes: socio-cultural participation in their communities and their own independent construction of meaning. Both of these processes must be facilitated and accommodated in children's bushfire education.