PROMOTING FIRE-FITNESS: A PROACTIVE APPROACH TO ENHANCING PREPAREDNESS

ABOUT THIS PROJECT

This research was conducted as a PhD study *Advancing public health in the context of natural hazards: normalising preparedness within a framework of adapted protection motivation theory*, under the broader CRC project *Managing animals in disasters*.

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SUMMARY

This research proposes practical processes and new public health policy to assist people to safely negotiate natural hazards in an increasingly climate change affected environment. This is achieved by normalising preparedness – to make fire-fitness routine and commonplace. With data gathered from a diverse regional community in South Australia, this research adapted Protection Motivation Theory to identify strategies that facilitate beneficial outcomes for individuals and communities. This research recommends that the application of fire-fitness principles should be tailored and societal-wide, to help narrow the gap between awareness and action, promote public safety and well-being, and identify topics requiring further research.

CONTEXT

Research shows that many people in high risk natural hazard areas are often not sufficiently prepared or not personalising the risk to themselves. Proactive strategies designed to normalise preparedness need to be developed and evaluated to help save lives (of humans, companion or recreational animals, livestock and wildlife) in a bushfire.
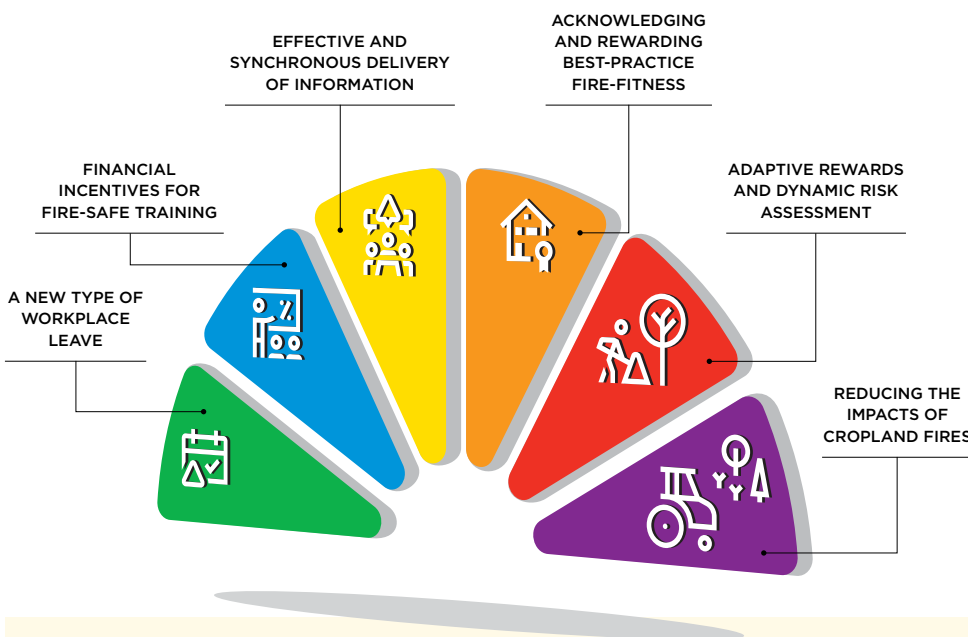
BACKGROUND

Protection Motivation Theory (PMT) describes how individuals are motivated to react in a protective way towards a perceived threat. The mismatch between people's awareness of a hazard threat and their readiness to manage the threat or treat the risk – known as the awareness-preparedness gap – is widely acknowledged as persistently too large. While the gap remains, human morbidity and mortality in bushfire (and other) natural hazards will not be significantly reduced; people will continue to make dangerous decisions, thereby perpetuating a cycle of negative outcomes and ramifications.

Previous studies have contributed to addressing this problem, but none have identified the need to establish fire-fitness– a year-round normalised culture of disaster preparedness that precedes natural hazards and therefore mitigates damage.

BUSHFIRE AND NATURAL HAZARDS CRC RESEARCH

Consistent with other CRC research, this study recognises the importance of animals in the lives of their owners and communities when faced with a natural hazard – whether companion, assistance, livestock, sport or recreational animals, or wildlife. Data were gathered from two demographically diverse groups – animal owners and emergency responders – in Lower Eyre Peninsula (South Australia) between June and August 2015 (eight focus groups, n=72; 32 individual

EFFECTIVE AND SYNCHRONOUS DELIVERY OF INFORMATION

ACKNOWLEDGING AND REWARDING BEST-PRACTICE FIRE-FITNESS

FINANCIAL INCENTIVES FOR FIRE-SAFE TRAINING

ADAPTIVE REWARDS AND DYNAMIC RISK ASSESSMENT

A NEW TYPE OF WORKPLACE LEAVE

REDUCING THE IMPACTS OF CROPLAND FIRES

FIRE-FITNESS

Processes by which natural hazard preparedness is normalised amongst individuals, families or communities. This precedes preparedness messaging, leading to timely and safe decision-making. While the name refers to fire, the concept is applicable across natural hazards.

interviews). Participants in each group were asked about their perceptions of each other's natural hazard preparedness and response, barriers to good decision making, and what information they needed to help them make safe decisions and improve their preparedness. The results were analysed using Thematic Analysis and actively identified a number of relevant and widely applicable strategies that can be used to save lives.

RESEARCH FINDINGS

Findings were grouped into six categories of possible strategies and proactive public policies that could be developed, each aiming to make preparedness as routine as buying the groceries or fuelling a car. These strategies are not intended to replace preparedness campaigns. Rather, they are designed to change the preparedness environment by establishing a preceding culture of fire-fitness as a routine social norm – to develop a prescient suite of lifestyle adaptations to confront the new reality of extreme weather events.

These strategies are:
- A new type of workplace leave, for example, Catastrophic/Code Red day or Extreme fire weather leave.
- Financial incentives, for example, a discount on municipal rates for attendance at fire-safe seminars.
- Effective and synchronous delivery of information, for example, information delivered at the same time to different members of a family via workplace, school and social settings.
- Acknowledging and rewarding best-practice fire-fitness, for example, accreditation for best-prepared properties (which has the potential to positively influence market price of those properties).
- Adaptive rewards and dynamic risk assessment, for example, facilitating trust and positive relationships with local fire authorities by clearing rubbish and vegetation to ensure ease of access.

- Reducing the impacts of cropland fires through, for example, review of the use of firebreaks, crop types, crop placement and planting around assets.

Each of these strategies contributes to cultivating a culture of preparedness over the short-, medium- and/or long-term. Importantly, a fire-fitness program for any given group must be locally relevant and tailored to the particular community.

HOW COULD THIS RESEARCH BE USED?

Considering the damage of the 2019/20 bushfire season and the predicted increase in frequency and severity of extreme weather events, and the fact that Australia's bushfire seasons are becoming longer and more severe, this research can significantly contribute to reinvigorated conversations that recognise the importance of mitigation through prevention and preparedness.

The recommendations from this research are readily achievable. Local advocacy and pilot programs would be a logical first step.

While these strategies are able to be adopted and implemented quickly, they will promote and achieve medium- to longer-term changes in the public's level of improved fire-fitness and also in the perception among the wider population of the need to adapt to a worsening natural hazard environment.

FUTURE DIRECTIONS

The next stage of the research is utilisation, with outreach underway to attract participant organisations to trial and evaluate some of the fire-fitness strategies. This will involve community consultation and design of bespoke fire-fitness programs. Early trials aim to be completed and reported within the next two years.

Given the fires in South Australia in 2019/20, an agricultural application of fire-fitness programs will focus on croplands and cropland fires – specifically the use of firebreaks, crop type and placement and planting around assets.

FURTHER READING

Westcott R (2017) *How to become bushfire-prepared without really noticing: be fire-fit! Weekly is worth it!,* Bushfire and Natural Hazards Cooperative Research Centre, available at www.bnhcrc.com.au/resources/presentation-audio-video/3834

Westcott R (2017) Narrowing the awareness-action gap: cultivating fire-fitness as a social norm through public policy initiatives. *Australian Journal of Emergency Management,* 31: pp.37–41.

Westcott R (2018) Advancing public health in the context of natural hazards: normalising preparedness within a framework of adapted Protection Motivation Theory, PhD thesis, Western Sydney University, Sydney, available at www.bnhcrc.com.au/publications/biblio/bnh-5323

Westcott R, Bambrick H, Ronan K & Taylor M (2019) Public health and natural hazards: new policies and preparedness initiatives developed from an Australian bushfire case study. *Australian and New Zealand Journal of Public Health,* 3: pp.395–400.