

Community level influences on individual bushfire preparedness

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Aim:

To examine what community level factors contribute to community level differences in preparedness & influence individual preparedness.

Background

It is now well established that there are large differences between communities in terms of fire preparedness and response to bush fires (see below).

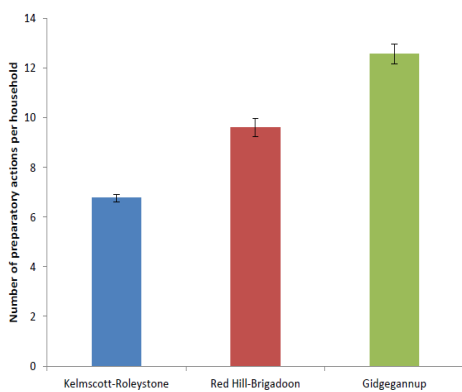


Figure 19. Number of preparatory actions per household across different regions.

Figure 1: Results from UWA/Bushfire CRC post-fire investigations on preparedness in W.A.

The current study was designed to examine the apparent causes of these differences and, in particular, whether community level variables such as social capital, place attachment and confidence in government agencies responsible for fire management are predictive of these differences in fire preparedness. Such community level characteristics may be important in influencing risk perception, disseminating information about fire preparedness and providing resources for fire prevention and response.

Method

Residents were randomly selected from ten fire prone local government areas in Western Australia and 1342 agreed to complete a questionnaire on bushfire related issues.

The areas were selected on the basis of estimated bushfire preparedness: five were judged well prepared and five poorly prepared on the basis of information obtained from the Department of Fire and Emergency Services (DFES) Bush-Fire Threat Analysis (BFTA) system and data from a W.A. government survey of Local Governments' fire risk Identification and mitigation. Both urban fringe (4) and rural areas (6) were sampled.

Residents completed a questionnaire comprised of scales on social capital and place attachment and questions on risk perception, bushfire preparedness, previous experience with bushfire, involvement in bushfire prevention activities, confidence in bushfire management authorities and local government fire prevention and enforcement activities.

Results

Preparedness

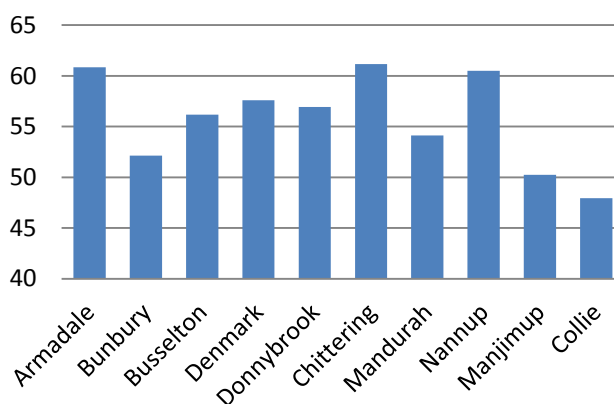


Figure 2: Community differences in residents' reports of bushfire preparedness

Communities differed on levels of **bushfire preparedness** ($F(9,1313)=6.92, p<0.001$) (see Figure 2), as well as in **Social Capital** ($F(9,1311)=9.41, p < 0.001$), **risk perception** ($F(9,1251)=10.07, p < 0.001$), **prior bushfire experience** ($F(9,1291)=6.50, p < 0.001$), **involvement in community bushfire preparation activities** ($F(9,1297)=8.44, p < 0.001$) and **confidence in local government (re fire)** ($F(9,1256)=5.22, p < 0.001$).

Armadale	Collie
Highest Preparedness	Lowest Preparedness
High Risk Perception	Low Risk Perception
High Fire Experience	Low Fire Experience
Low Confidence Govt.	High Confidence Govt.

Table 1: Significant differences between highest and lowest prepared communities ($p < 0.05$)

While the more complex community level analyses have not yet been completed, preliminary Hierarchical Linear Modelling using a null model showed that we are able to explain a significant amount of the variance on an individual level. When demographic variables have been accounted for, significant predictors of preparedness are **Social Capital** (additional 7.3% of variance), **being involved in a community preparedness activity** (+ 2.8%) **place attachment** (+ 2.1%). In total, this model accounts for 22% of the variance in preparedness.

Since the amount of variance contained at the community level is also significant (17.32, $p < 0.001$), further HLM analyses will attempt to account for this variance using community level predictors.