bushfire CRC

BUSHFIRE PREPAREDNESS: THE DEVELOPMENT AND VALIDATION OF A PSYCHOLOGICAL PREPAREDNESS SCALE

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PhD Aim

To develop and validate a self-report tool that can be used to measure an individual's psychological preparedness for a bushfire. This measure will benefit researchers in the development and evaluation of theories that are dedicated to shaping and promoting bushfire safe behaviour and will be an invaluable tool for fire agencies in their efforts to improve public safety.

Background

Bushfires are complex events that can be very stressful for those involved. While a moderate amount of stress can be motivating, high levels of stress (distress) can be demotivating and see people respond in unpredictable ways (see Figure 1).
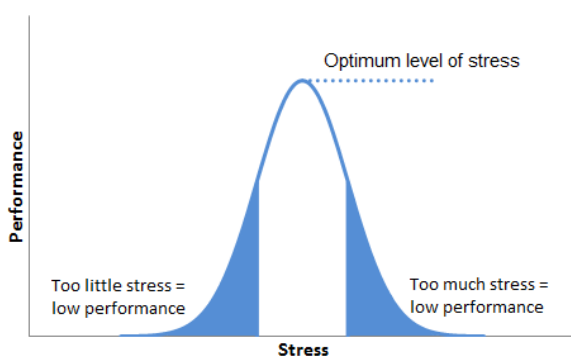

Figure 1. Stress and performance (Cox & Mackay, 1985).

The experience of distress can be dangerous during a bushfire because it can impair a persons cognitive functioning (e.g. decision making, attention) memory, and can cause confusion and disorientation (McLennan et al., 2011). Distress can also lead to long term psychological problems such as anxiety, depression and post-traumatic stress.

Therefore, it is important that people are psychologically prepared for a bushfire.

Study 1

The aim for study 1 was to: 1) conceptualise psychological preparedness; and 2) develop and evaluate a large pool of items that reflect this conceptualisation.

Method: Phase 1

A literature review was conducted to conceptualise psychological preparedness. The item pool was developed using items from previous measures, as well as using a literature review to write items. The researcher aimed to develop an item pool that was at least double the desired number of items, as well as ensuring the items saturated the construct definition.
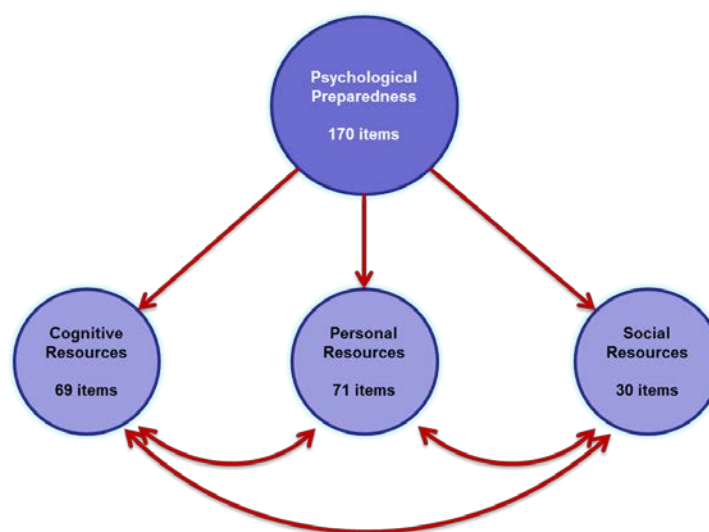
Results: Phase 1

Figure 2. Conceptual model of psychological preparedness and the number of items written for each scale.

Method: Phase 2

Participants: Eight experts evaluated the cognitive resources scale, 6 experts evaluated the personal resources scale and 9 experts evaluated the social resources scale.

Procedure: Experts were asked to rate the clarity and relevance of each item in one of the three scales and provide suggestions for improvement. Averages were calculated to assess the clarity and inter-rater agreement was calculated to assess the relevance. This data and a literature review were used to reword, delete or add items to the item pool.
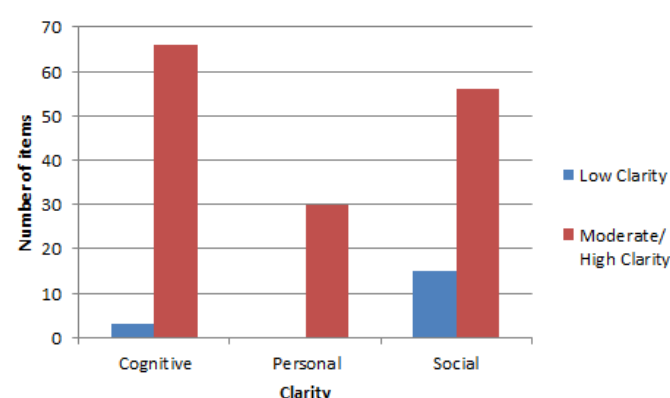
Results: Phase 2

Figure 3. The number of items rated with low clarity and moderate/high clarity.
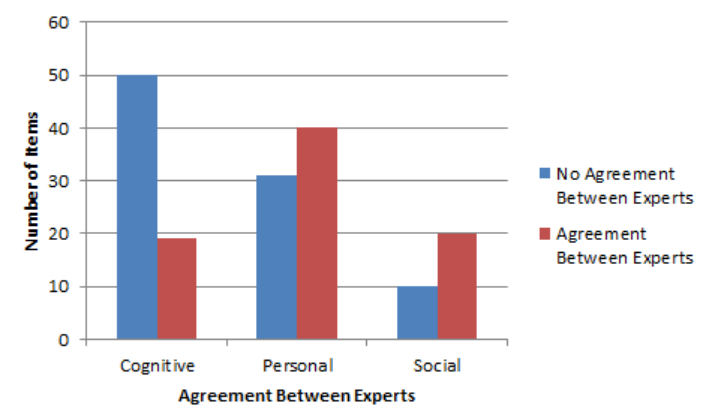

Figure 4. The number of items in each scale categorised by agreement or no agreement among experts.

For the items where there was no agreement between the experts a literature review was used to determine the relevance.

Based on the clarity and relevance data and the literature review changes were made to the item pool (see Table 1). All of the items that were retained were reworded to improve the clarity.

Table 1. *The changes made to each scale based on the results and a literature review.*

Scale	Number of items deleted	Number of items added	Change to total number of items
Cognitive	32	7	Reduced from 69 to 47
Personal	38	29	Reduced from 71 to 62 items
Social	8	4	Reduced from 30 to 26 items

Next Step

- Conduct an exploratory factor analysis to identify the underlying structure of the conceptual model.

- Further refine the item pool using the results from the exploratory factor analysis.

- Assess the reliability and validity of the measure.

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