

Unravelling Community Responses to Floodplain and Emergency Management

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Overview

- Community responses to flood education, communications & engagement (ECE)
- Introduction to community disaster psychology
- Psychological 'profiles' for flooding
- Implications for ECE

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Flood ECE

- Community consultation required for development and implementation of floodplain risk management studies and plans
- ECE used as a main strategy in flood preparedness, response to warnings and recovery
- Also used in post-flood learning

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Community responses to ECE

- Generally low rate of community involvement in flood studies and floodplain risk management plans
- Less than 20% with emergency plans
- After ordered to evacuate, 24% in Maitland (2007) and 68% in Grafton (2009) did not evacuate
- About 30% say they have driven, walked etc through floodwaters (several studies)

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"Why are people so unkind?"



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Judging risk (1)

Common perceptual bias'

- Optimism bias
- Risk Compensation syndrome')
- Proximal cues
- Availability heuristic



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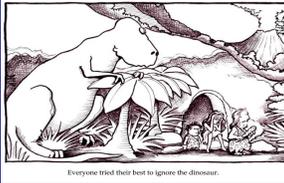
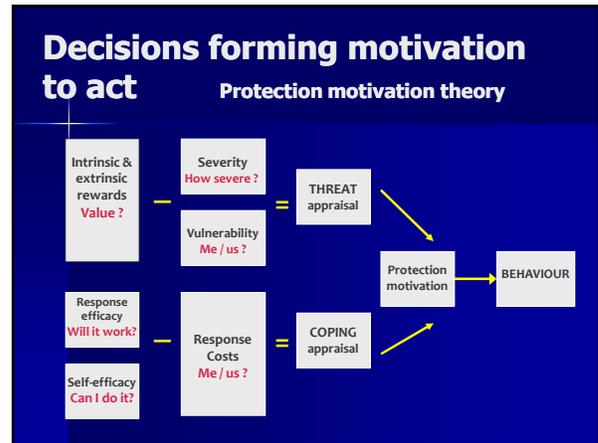
Judging risk (2)

Locus of control:

Internal - coping self-efficacy

External

- reliance on public flood protection
- denial/fatalism

Flood mitigation: predictive factors

- Higher perceived risk, social capital & socio-economic status
 - ▶ positive predictors
- Psychological factors (e.g. powerlessness) stronger than socio-economic status (income, education)

Lin (2008)
- Trust in public mitigation reduces perceived likelihood & dread – drivers of individual intention

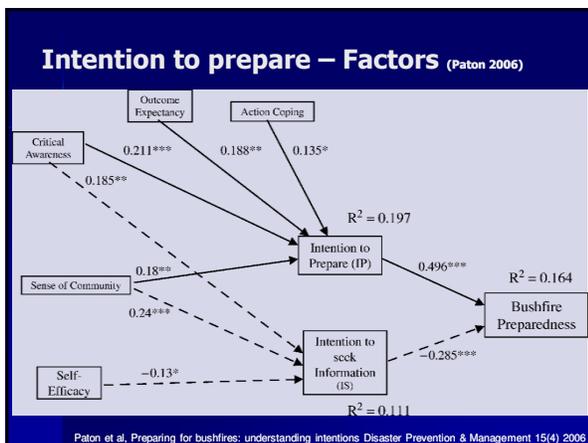
Terpstra (2011)

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Preparedness: the road to good intentions

- 'Preparing' & 'Info seeking' groups
 - fundamentally different intentions

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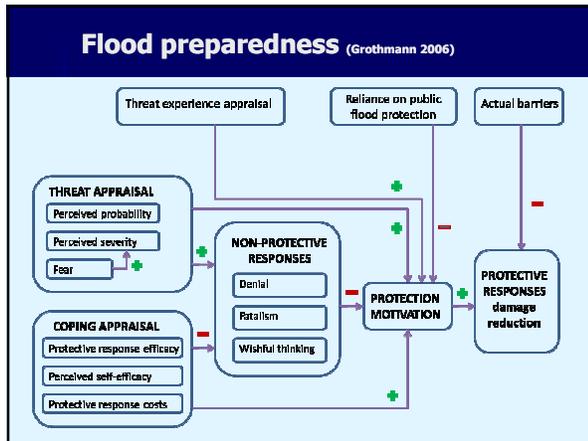


Assisting preparedness: ...possible approaches & potential pitfalls

- Education, awareness, and knowledge-building
 - ▶ all good – but insufficient
- Fear appeals
 - ▶ can promote denial / avoidance
- Need to encourage control beliefs, basic competencies



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Preparedness 'profiles'

- Research & experience suggests three broad flood prep groups
 - 'Customers'
 - 'Visitors'
 - 'Experts'
- Different ECE focus

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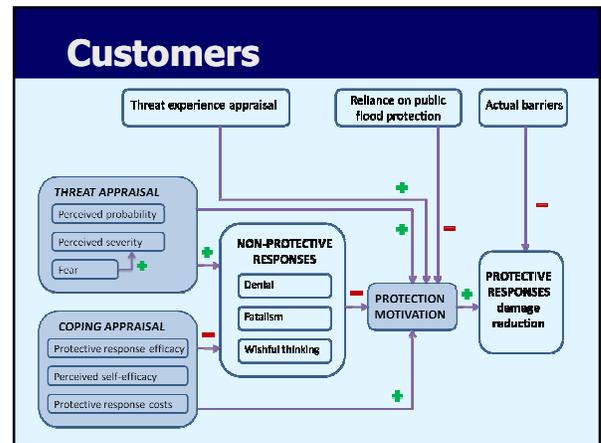
Customers



Characteristics:

- expect positive outcomes
- action coping, problem solving
 - predicts intention to prepare

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Customers



ECE challenge: check the fine print

ECE focus: preparing ► content

ECE addresses:

- **Content** - detail, timing of planned actions
- Receptive - info / education appropriate

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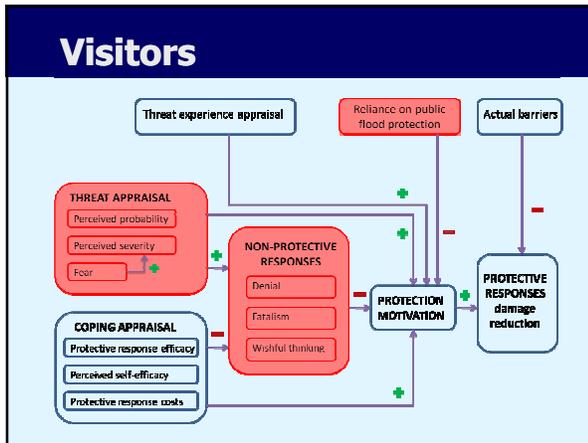
Visitors



Characteristics:

- Expect negative outcomes
- Perceive negative self / response efficacy
- Denial, risk 'transfer', avoidance
 - predicts intention to not prepare ('seek info')

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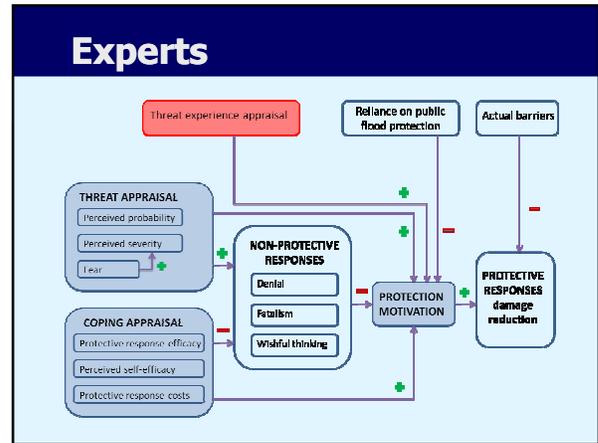


Visitors

ECE challenge: access
 ECE focus: not preparing ► affect
 ECE addresses:
 ■ **Anxiety** – via specific competencies & control beliefs
 – Hazard / damage - selective
 – How specific actions can reduce damage
 – Build 'mental models' – prep & response

Experts

Characteristics:
 ■ Prior experience, strong opinions/attitudes
 ■ Community ('inside') knowledge
 ■ Potential discounting official advice



Experts

ECE challenge: buy-in
 ECE focus: prepared ► process
 ECE addresses:
 ■ **Collaboration** – how to utilise experience
 ■ Potential to misinform, undermine others

Recovery and Resilience

■ Different trajectories
 ■ Importance of preparedness
 ■ 'Current' experience affects future appraisals
 – evacuation, preparing
 ■ Potential for adaptation and growth

The graphs show various trajectories for Recovery, Resilience, and Reliance on public flood protection. The graphs are labeled: Resistance, Resilience, Recovery, Reliance, Resilience, and Reliance. The x-axis for all graphs is 'Post-flood' with points Post1, Post2, Post3, Post4, Post5. The y-axis represents the level of the variable.

Norris et al. (2009)
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Implications for ECE

- Assumption has been that the community flood psychological response is uniform
- Need to identify and understand psychological profiles when interacting with people in flood-affected communities
- ECE design needs to consider at least three psychological profiles for flooding: 'Customers' – provide detailed assistance in learning (e.g. learning resources); 'Visitors' – provide access to learning (e.g. use of social media); 'Experts' – encourage collaboration using their experience
- Further research required

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25