

# A Multicomponent CBT for the Treatment of Insomnia and Nightmares in Survivors of Bushfires Presenting with PTSD

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# Consequences of Bushfires

- Increasing frequency and severity due to climate change
- Annual global financial losses estimated between USD \$71.1 – \$347.8 billion
- Loss of life, widespread displacement, and destruction of homes and infrastructure
- Disruption of social networks, community structures, and employment opportunities
- Elevated rates of alcohol and substance use, cardiovascular issues, and premature mortality



(Gary, 2019)



# Consequences of Bushfires

- Depression & Anxiety
- Suicidal ideation
- Sleep disorders
- Post-traumatic stress disorder (PTSD)





# Why Sleep Best-i?

## Stories of Impact

- Participants shared long-term mental health challenges following bushfires, including nightmares, insomnia, and PTSD.

## The Need for Innovative Solutions

- Traditional treatments often do not fully address the complex relationship between sleep disruption and trauma.

## Introducing Sleep Best-i

- A structured, self-paced digital program designed to support recovery through:
  - Insomnia management
  - Nightmare reduction
  - PTSD symptom relief



# Sleep Best-i

- **Psychoeducation** – Highlights the importance of sleep and how trauma can affect sleep patterns
- **Sleep Scheduling** – Supports participants in setting a consistent routine, realistic sleep goals, and better bedtime habits
- **Cognitive Restructuring** – Teaches how to challenge unhelpful thoughts that disrupt sleep and worsen trauma symptoms





# Sleep Best-i

- **Understanding Trauma and PTSD** – Covers the impact of trauma on mental health, PTSD symptoms, and strategies to manage distress
- **Managing Nightmares** – Teaches participants to re-write nightmares into neutral or positive dreams
- **Relapse Prevention** – Helps maintain progress, identify triggers, and plan for long-term recovery
- **Digital Delivery** – Each module is around 17 minutes, making it easy to fit into a busy schedule



## Group Allocation

- Treatment group (n = 16)
- Waitlist control group (n = 14)

## Demographics

- Age: 18–79 years (M = 52.5, SD = 16.26)
- Gender: 63.3% female (n = 19), 36.7% male (n = 11)

## Inclusion Criteria

- $ISI \geq 8$  (Insomnia)
- $NDI \geq 3$  (Nightmares)
- $PCL-5 \geq 31$  (PTSD)

## Analysis Approach

- Intention-to-Treat (ITT) & Per Protocol (PP)
- Mixed-effects linear regression
- Difference-in-difference models





# Findings

## ITT Analysis – Primary Outcomes

- Significant improvement over time:
  - NDI ↓ 1.64 points ( $p = .001$ )
  - PCL-5 ↓ 10.64 points ( $p = .009$ )
  - No significant changes in insomnia symptoms

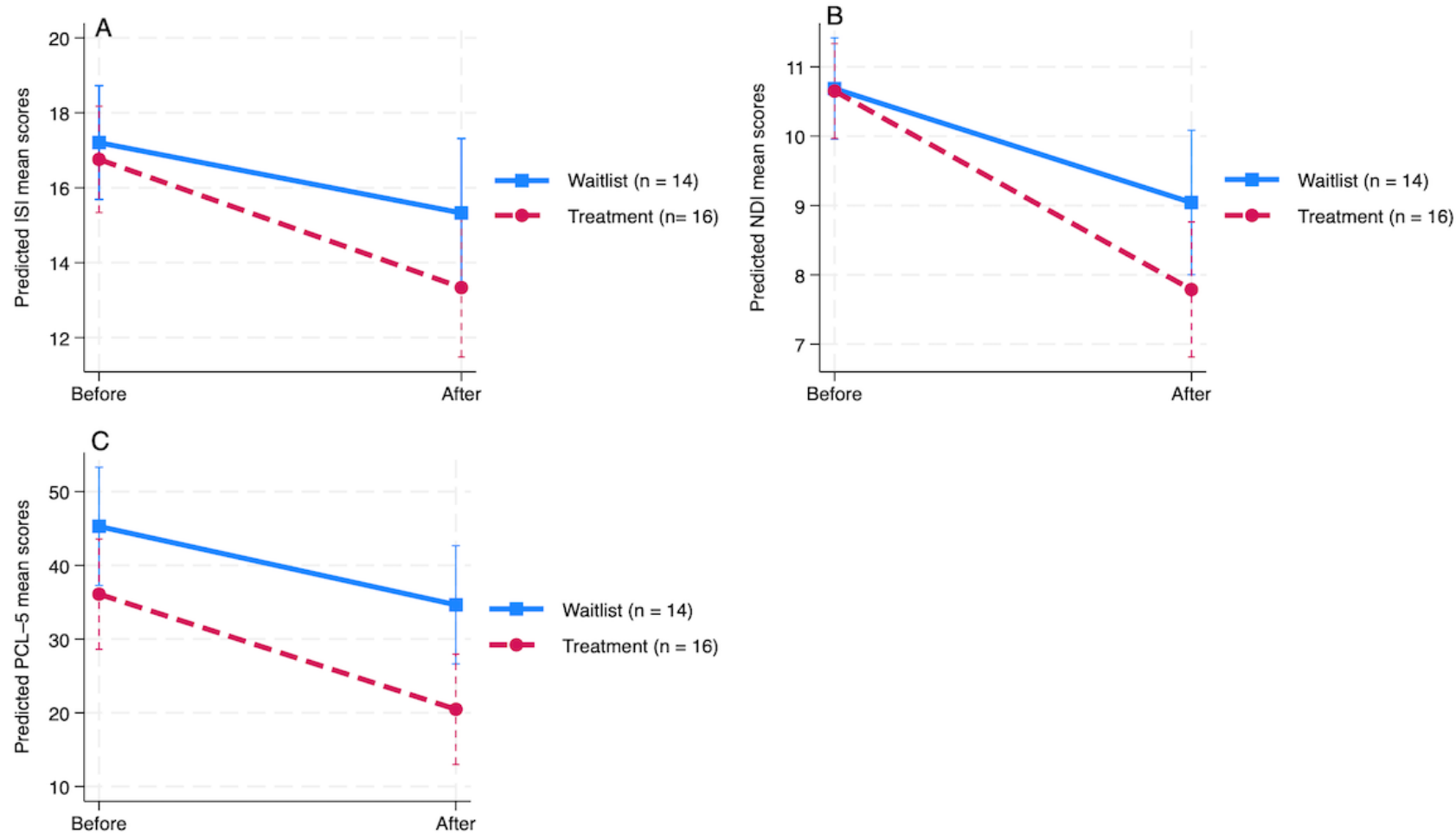
## PP Analysis

- Results were comparable across all measures

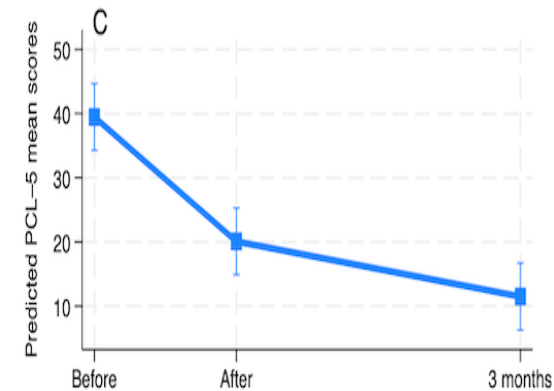
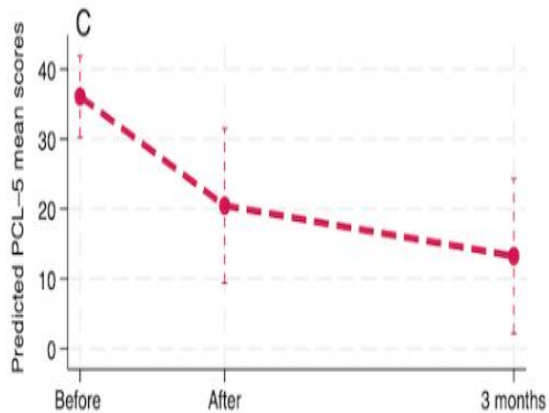
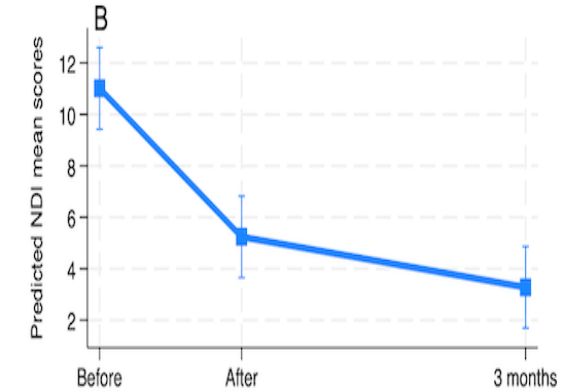
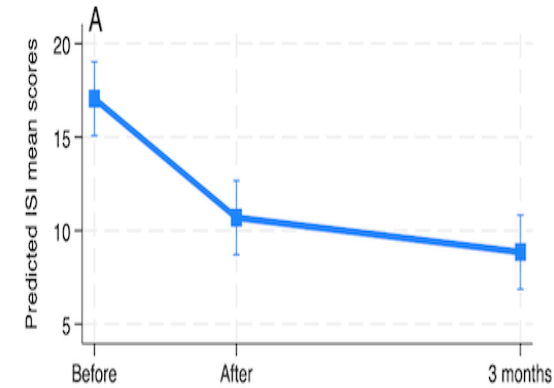
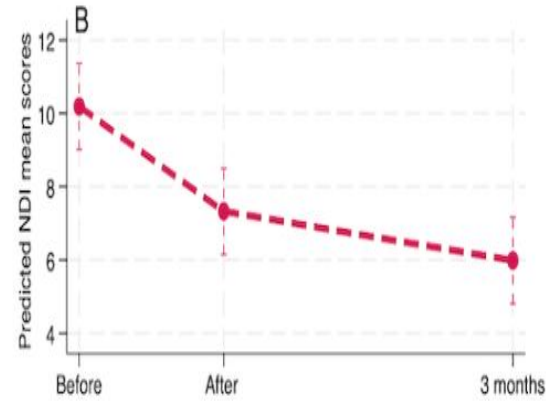
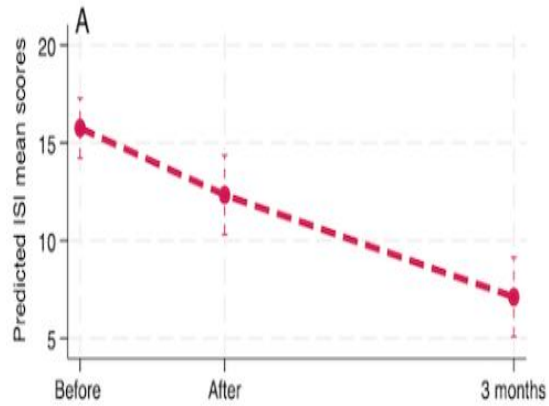




# Participants' Response to Sleep Best-i



# Treatment & Waitlist Group 3 Months Follow-Up





# Implications

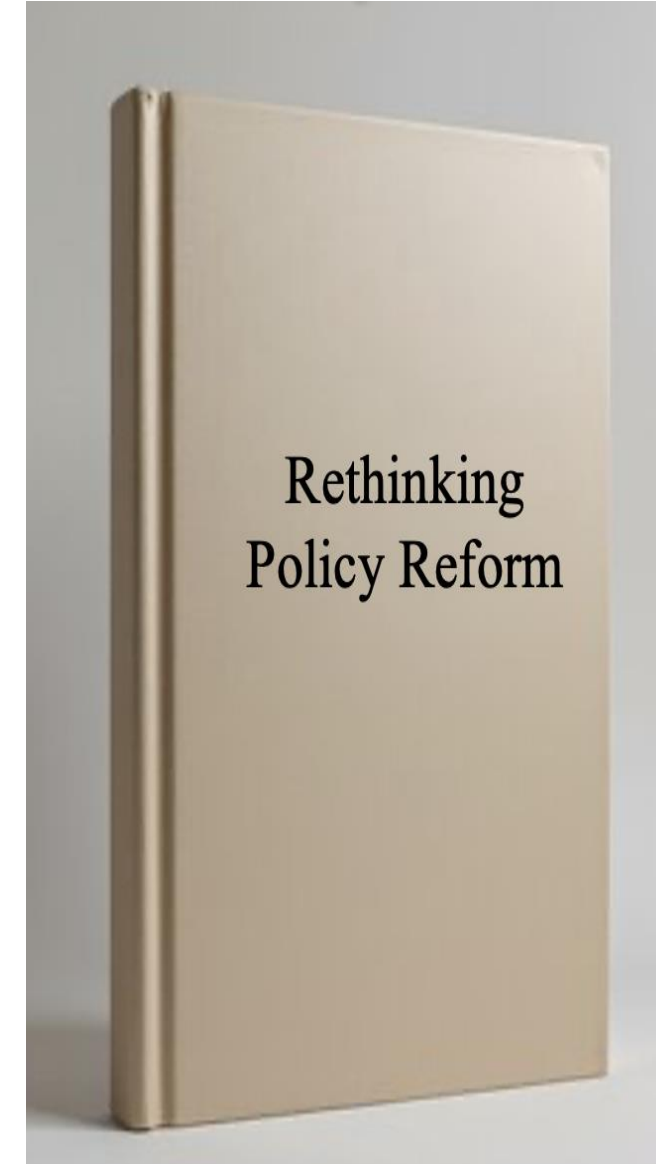
- Limited focus on psychological preparedness
- Current programs emphasise practical actions (e.g., staying calm)
- Little attention to mental resilience
- Many Australians are unaware of mental health risks

## **Proposed shift**

- Add psychoeducation on bushfire-triggered mental health issues

## **Boost preparedness with:**

- Coping strategies
- Emotional regulation tools
- Clear pathways to mental health support

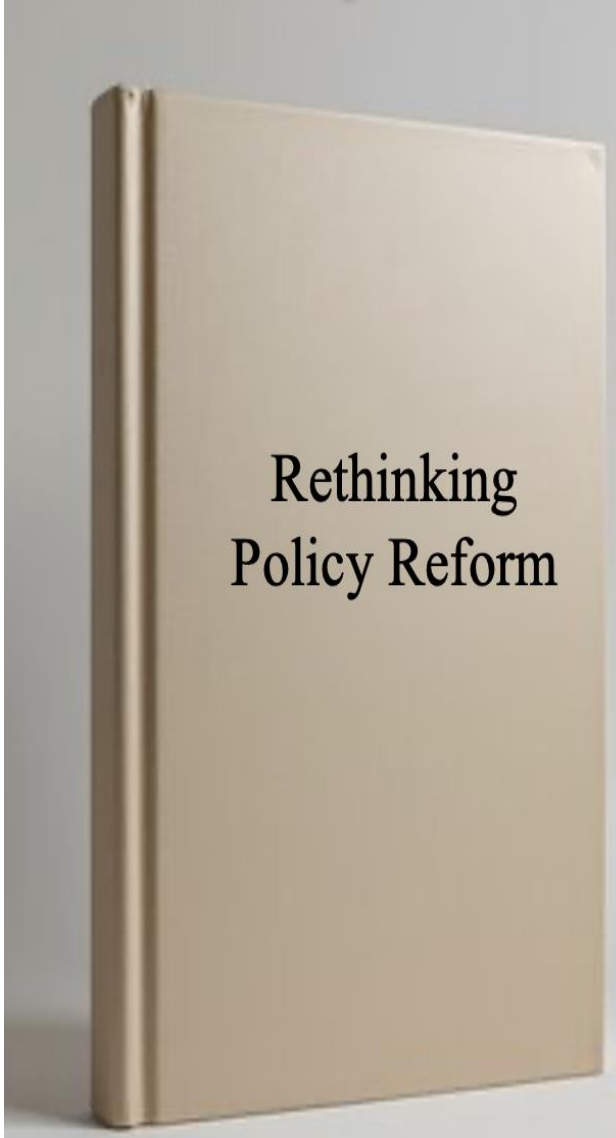


# Implications

- Limited GP training on sleep disorders
- Patient reluctance due to stigma, cost, or preference for self-help
- Survivors need timely support with housing, employment, education, and community connection

## Proposed Solutions

- Train health professionals in trauma-informed care, with a focus on sleep and disaster recovery
- Promote help-seeking to reduce over-reliance on self-help
- Address post-fire stressors like relocation, job loss, and social disconnection



Rethinking  
Policy Reform



# Implications

## **Personalised Care**

- CBT-I may be ineffective without tailoring to age, anxiety levels, motivation, and co-occurring conditions

## **Community Empowerment**

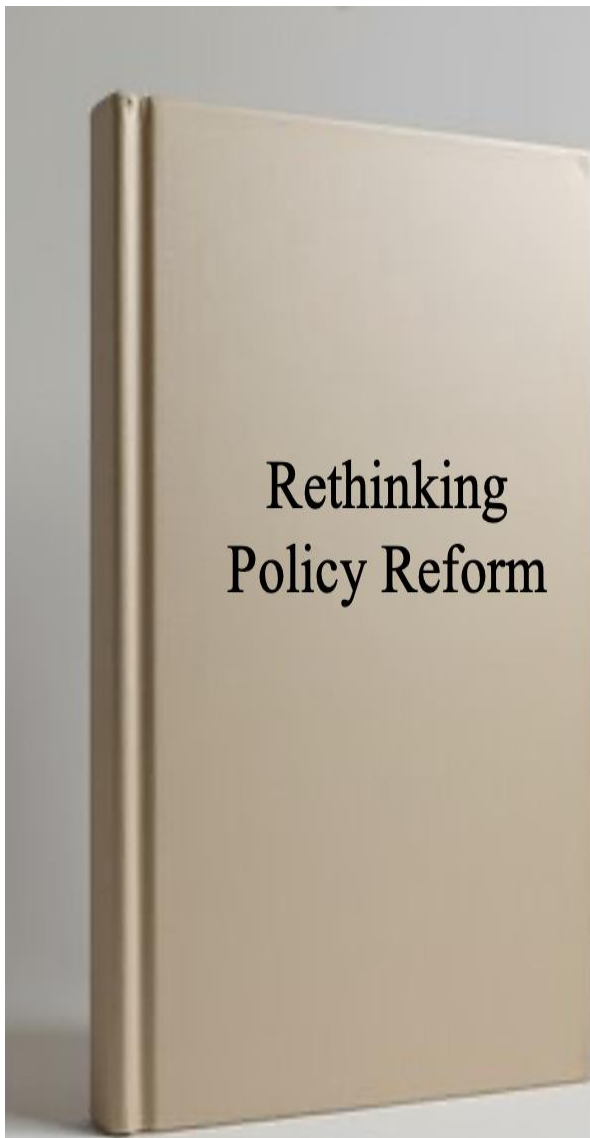
- Peer support, local initiatives, and culturally-sensitive programs build trust and promote long-term healing

## **Digital Innovation**

- Online CBT and mobile apps enhance access, reduce costs, and offer flexible support options

## **Integrated Approach**

- Combining digital and in-person care, backed by community-based support, is essential for lasting impact



Rethinking  
Policy Reform



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## Digital Cognitive Behavioral Therapy–Based Treatment for Insomnia, Nightmares, and Posttraumatic Stress Disorder Symptoms in Survivors of Wildfires: Pilot Randomized Feasibility Trial

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# Questions?

- **If this presentation caused any emotional discomfort, you may wish to consider the following support options:**
- Contact your GP/ psychologist
- Contact Beyondblue on (1300 22 4636). Email and chat service is also available <https://beyondblue.org.au/get-immediate-support> or
- Call a registered nurse by calling the healthdirect hotline on
- (1800 022 222) from anywhere in Australia. The hotline is open 24 hours, 7 days a week.
- If you have thoughts of suicide:
- Contact Lifeline on (13 11 14) or
- Suicide Call Back Service on (1300 659 467)