



University of  
**Nottingham**

UK | CHINA | MALAYSIA

A large, high-resolution image of the Earth as seen from space, showing the African continent and surrounding oceans. The image is framed by a thin white border.

# **Stove Use, Indoor AQ Data, and Behaviour Change**

Dr James Heydon

School of Sociology and Social Policy

[James.Heydon@Nottingham.ac.uk](mailto:James.Heydon@Nottingham.ac.uk)




# Air Quality Research

Open Access

Article

## Indoor Air Pollution from Residential Stoves: Examining the Flooding of Particulate Matter into Homes during Real-World Use

by  Rohit Chakraborty <sup>1,\*</sup>  ,  James Heydon

<sup>1</sup> Department of Civil and Structural Engineering

Original Paper | [Open Access](#) | [Publication](#)

Wood burning stove  
'stark data'

[James Heydon](#)  & [Rohit Chakraborty](#)

[SN Social Sciences](#) **2**, Article number

JOURNAL ARTICLE

## Between Ordinary Harm and Deviance: Evaluating the UK's Regulatory Regime For Controlling Air Pollution From Wood Burning Stoves

James Heydon 

*The British Journal of Criminology*, azac102,

<https://doi.org/10.1093/bjc/azac102>

**Published:** 01 February 2023

from  
udy





## Study Purpose

- Two broad approaches to understanding how people interpret air pollution data:
- The older 'public deficit' approach (Wall, 1974; McBoyle, 1972).
- The newer 'social constructionist' approach (Bickerstaff and Walker, 2001; Cupples et al, 2007).

## Methods

- 30 participants in 20 households.
  - 19 with a Defra-approved stove, 1 with an open fire used according to Defra.
- Pre-use surveys, during-use research diaries, post-use interviews.
- Quantitative and qualitative (thematic) analysis.

## Two Pathways, One Outcome

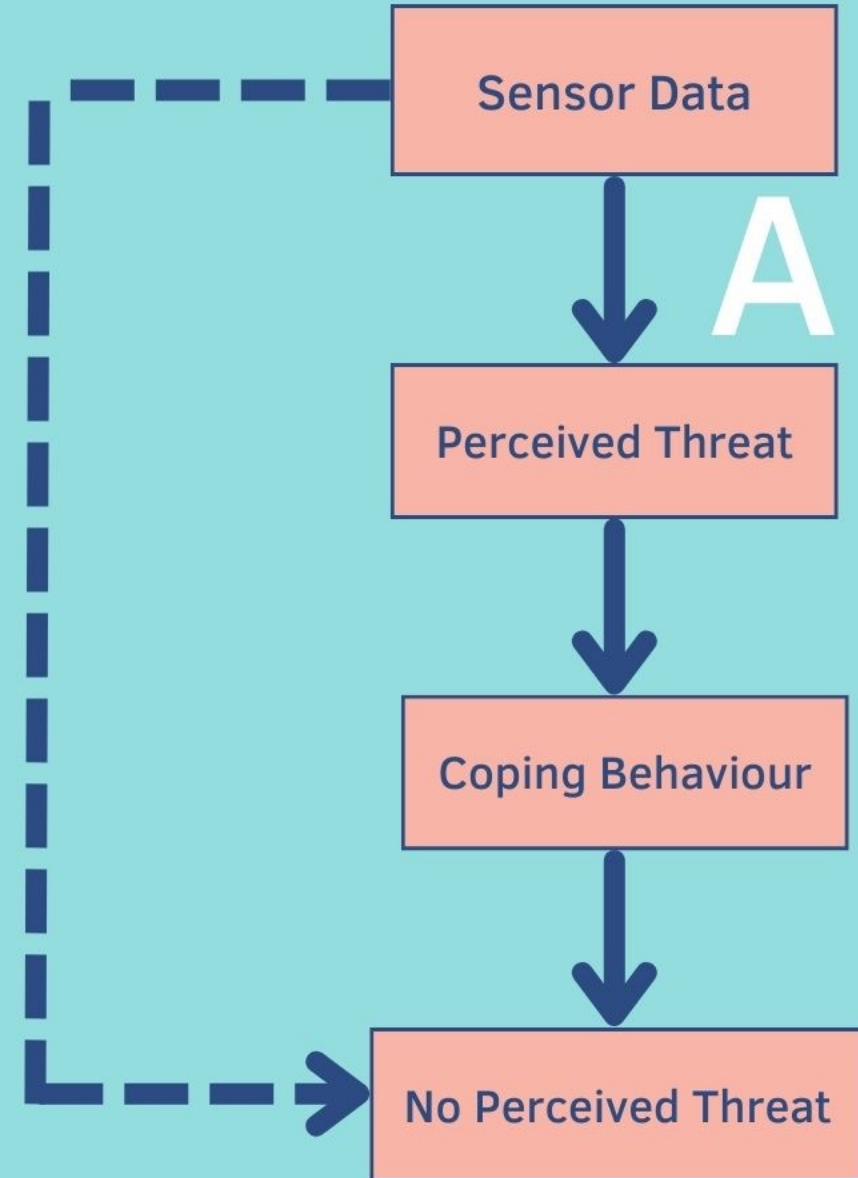
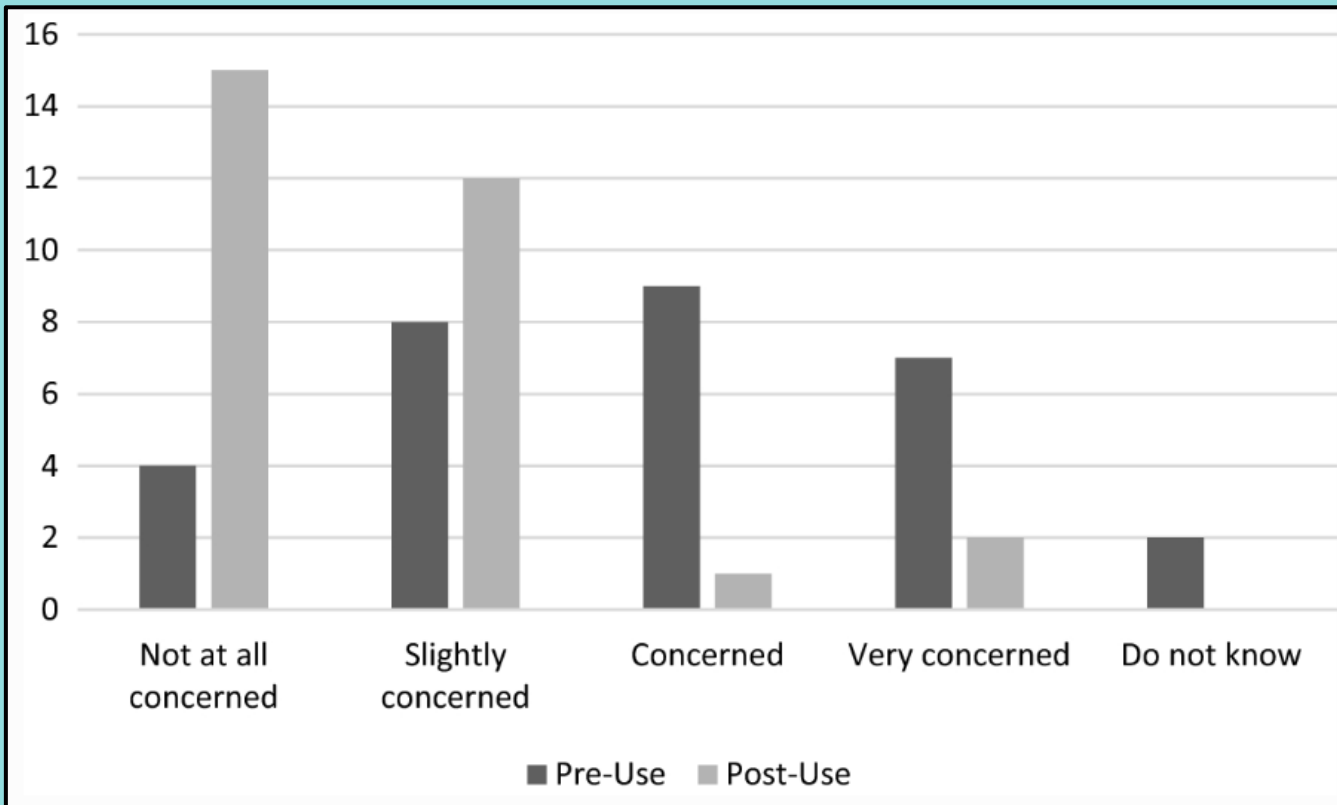


Fig. 1) Reported concern about indoor air pollution from stoves

# Explaining Perceptions: Situation Factors

"You can see what the figure is but it's not telling you what the impact is. There's no comparison with anything else. It's not contextualised in any way...it's not bound to anything, is it? It's cold, stark data".



# Explaining Perceptions: Situation Factors

"I was worried at first and now I'm not particularly...We got some really big peaks when we were cooking, which everybody does, and you can't really get away from that so how bad can it be, really?"





The stove is DEFRA approved for smoke control areas and refers to environmental credentials in sales literature. I burn fully seasoned, waste wood and burn far less gas as a result.

(Participant 12, pre-use survey)

Yes, it is environmentally friendly. It's DEFRA-exempt, we burn only well-seasoned dry logs, is CO<sub>2</sub> neutral and we use locally sourced fuel.

(Participant 19, pre-use survey)

It's DEFRA-rated, we burn a waste wood-based briquette product and seasoned logs, carefully monitoring burning conditions. It's likely better in terms of carbon neutrality than the gas central heating.

(Participant 28, pre-use survey)

25

air

entally

lly'



# Concluding Remarks

- Traditional 24hour averages inappropriate for this behaviour
- Data can open a gateway to existing, incomplete or imprecise understandings of air pollution.
- Disrupting positive preconceptions key to making individual exposure data more effective.





University of  
**Nottingham**

UK | CHINA | MALAYSIA

**Any Questions?**